

*CURRICULUM VITAE*

**PEDRO FRANCISCO QUINTANA-ASCENCIO**

*Biologist, M.Sc., Ph.D.*



**Department of Biology  
University of Central Florida  
Professor**

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*Place and date of birth:* December 9, 1959, México City, Distrito Federal, **México.**

Married to **María Cristina Morales Hernández.**

Twin daughters: **Amarantha Zyanya and Eréndira Malinali.**

**RESEARCH INTERESTS:**

*Population and community ecology, Evolution of life histories, Ecological effects of disturbance and spatial pattern, Ecological modeling and statistics, Conservation Biology, Consequences of human activity on species persistence and ecological communities' diversity, and integrity.*

**EDUCATION:**

- 1992-1997 **Ph. D.:** Department of Ecology and Evolution, Division of Biological Sciences, **State University of New York at Stony Brook**, USA. Thesis: *Population viability analysis of a rare plant species in patchy habitats with sporadic disturbance*. (April 10, 1997) Academic Committee: CH Janson, ES Menges, J Gurevitch, L Ginzburg, and JD Thomson.
- 1987-1988 **M. Sc.:** Centro de Botánica, **Colegio de Postgraduados**, Chapingo, México. Thesis: *La condición sucesional de dos encinos dominantes (Quercus laurina Humb. & Bonpl. y Q. crispipilis Trel.) de los bosques templados de Los Altos de Chiapas*. [The successional condition of two dominant oak species at the highlands of Chiapas, Mexico] (April 6, 1989). Academic Committee: TL Wendt, M González-Espinosa, and A Castillo-Morales.
- 1978-1982 **B. Sc.:** Facultad de Ciencias, **Universidad Nacional Autónoma de México**, México. Thesis: *Dispersión de las semillas de nopal (Opuntia spp.) por animales silvestres y domésticos en "El Gran Tunal", San Luis Potosí*. [Seed dispersal of *Opuntia* spp. by wild and domestic animals at "El Gran Tunal", San Luis Potosí] (November 8, 1985). Academic Committee: M González-Espinosa, J Carabias Lilo, R Dirzo, K Oyama, and L López Mata.

**CURRENT EMPLOYMENT:**

- 2015-present Full Professor  
 2009-2015 Associate Professor  
 2003-2009 Assistant Professor  
 Department of Biology, **University of Central Florida**, Orlando, Florida, USA

**PREVIOUS EMPLOYMENT:**

- 1998-2009 Profesor Asociado B, División de Conservación de la Biodiversidad, Departamento de Ecología Terrestre. **El Colegio de la Frontera Sur**, San Cristóbal de Las Casas, Chiapas, México, under a leave of absence 2000-2009.
- 2000-2003 Research Assistant V (Postdoctoral position) at Plant Ecology Laboratory, **Archbold Biological Station**, Lake Placid, Florida, USA.
- 1989-1992 Associate Researcher, Área Agroecológica, **Centro de Investigaciones Ecológicas del Sureste**, San Cristóbal de Las Casas, Chiapas, México.
- 1985-1986 Research Assistant, Centro de Botánica, **Colegio de Postgraduados**, Chapingo, Estado de México.
- 1982-1983 Research Assistant, Departamento El Hombre y su Ambiente, **Universidad Autónoma Metropolitana-Xochimilco**, México, D. F.

## VISITING RESEARCHER:

Year	Location	Host
Feb-Mar 2019	<b>Universidad Técnica Particular de Loja,</b> Loja, Ecuador	Diego Vélez Mora
2014-2017 (2 months/yr)	<b>Universidad Técnica Particular de Loja,</b> Loja, Ecuador	Carlos Iván Espinosa
Jan-May 2012	<b>School of Botany, University of Melbourne,</b> Victoria, Australia	Mark Burgman and Joslin Moore
Jun-Dec 2011	<b>Universidad Rey Juan Carlos,</b> Madrid, Spain	José Maria Iriondo
June 2009	<b>Estación Biológica Doñana,</b> Sevilla, Spain	Xavier Picó
June 2007	<b>Estación Biológica Doñana,</b> Sevilla, Spain	Xavier Picó
Jun-Aug 2005	<b>Universidad de Valladolid,</b> Soria, Castilla y León, Spain	José Olano
July 2005	<b>Universidad Autónoma de Barcelona,</b> Centre de Recerca Ecològica i Aplicacions Forestals, Barcelona, Catalunya, Spain	Xavier Picó
1994-1997	<b>Archbold Biological Station</b> Lake Placid, Florida, USA.	Eric S. Menges

## HONORS, AWARDS AND FELLOWSHIPS:

2019	A species of frog was dedicated on my name: <i>P. quintanai</i> .	Veronica L. Urgiles, Paul Székely, Diana Székely, Nicholas Christodoulides, Juan C. Sanchez-Nivicela, Anna E. Savage Genetic delimitation of <i>Pristimantis orestes</i> (Lynch, 1979) and <i>P. saturninoi</i> Brito et al., 2017 and description of two new terrestrial frogs from the <i>Pristimantis orestes</i> species group (Anura, Strabomantidae). <b>ZooKeys 864:</b> 111-146.
2019	Award	Research Incentive Award, <b>University of Central Florida.</b>
2018-2019	Sabbatical Leave	College of Sciences, <b>University of Central Florida</b>
2014-2017	Fellowship Prometeo	Secretaría de Ciencia, Tecnología e Innovación, <b>Ecuador</b>
2011-2012	Sabbatical Leave	College of Sciences, <b>University of Central Florida</b>
2012	Fellowship	Australian Centre of Excellence for Risk Analysis, University of Melbourne, Victoria, <b>Australia</b>
2011	Fellowship	Ministerio de Educación y Ciencia, <b>Spain</b>
2008	Award	Teaching Incentive Program, <b>University of Central Florida</b>
2008	Award	Annual Excellence in Graduate Teaching award for the College of Sciences, <b>University of Central Florida.</b>
2005-2014	Research Affiliate	<b>Archbold Biological Station,</b> Lake Placid, Florida.
2015-ongoing	Research	<b>Archbold Biological Station,</b> Lake Placid, Florida.

	Associate	
2005	Fellowship	Ministerio de Educación y Ciencia, <b>Spain</b>
1996	Award	Catherine H. Beattie. The Garden Club of America and the Center for Plant Conservation, <b>Missouri Botanical Gardens</b>
1995	Award	R. R. Sokal. Department of Ecology and Evolution, <b>State University of New York at Stony Brook</b>
1992-1997	Scholarship	Fulbright/Consejo Nacional de Ciencia y Tecnología/Institute of International Education, <b>México</b>
1998-2001	Fellowship	S N I as Investigador Nacional. <b>México</b>
1989-1993	Fellowship	S N I as Investigador Nacional. <b>México</b>
1987-1988	Scholarship	Centro de Botánica, Colegio de Postgraduados, <b>México</b>
1987-1988	Scholarship	Consejo Nacional de Ciencia y Tecnología, <b>México</b>
1984-1985	Scholarship	Consejo Nacional de Ciencia y Tecnología, <b>México</b>

**RESEARCH ACCOMPLISHMENTS:**

My research concentrates on the interactive role of human induced changes in disturbance and spatial structure on species persistence and community integrity. I am interested in understanding how variation in disturbance frequency, intensity and heterogeneity alter species life history and community dynamics. I consider fundamental assessing the effect of habitat destruction and fragmentation on species colonization and extinction dynamics, and species interactions. My research evaluates, through hypothesis testing, the combined effect of alterations in disturbance and habitat spatial structure due to the pervasive consequences of human activity. I visualize regional landscapes as dynamic mosaics of communities shaped by the interaction of natural and anthropogenic influences. My research agenda contributes to the scrutiny of biological concepts, the evaluation and recommendation of management strategies, and the development of restoration plans. To reach these goals, I combine long-term data collection, short-term studies, field experiments and modeling. My studies merge analysis at different spatial scales. I rely on collaborations with colleagues to expand and complement my research efforts. My investigations provide opportunities for graduate and undergraduate students to study biology, adaptive management and restoration techniques.

**SUMMARY OF FUNDING HISTORY:**

**RESEARCH GRANTS OBTAINED WHILE AT THE *UNIVERSITY OF CENTRAL FLORIDA***

<b>YEARS</b>	<b>TITLE / DONOR INSTITUTION</b>	<b>AMOUNT USD</b>
2019-2022	<b>Potential Mechanisms of Population Decline: Anuran Responses to Prescribed Fire.</b> Joint Fire Science Program. Shared with I Biazzo.	\$11,379
2014-2019	<b>Using long-term data, experiments and modeling to assess disturbance-demography dynamics in changing environments.</b> National Science Foundation (Co PI). Shared with E.S Menges	\$124,279

2013-2016	<b>Transpiration by Carolina Willow (<i>Salix caroliniana</i>): environmental effects and cost-efficient management.</b> St. Johns River Water Management District (Co PI) Shared with J. Fauth, R. Hinkle, D. Wang (Department of Civil Engineering) and Yung En Chee (University of Melbourne).	\$300,000
2010-2013	<b>Assessing tradeoffs among ecosystems services in a payment-for-water services program on Florida Ranchlands.</b> Environmental Protection Agency (Co PI). Shared with H. Swain, D. Jenkins, J. Fauth, and P. Bohlen	\$260,695
2009-2012	<b>Ecological studies of willow (<i>Salix caroliniana</i>).</b> St. Johns River Water Management District (Co PI) Shared with J. Fauth	\$150,000
2008-2013	<b>The next decade in continuing long-term demographic research on Florida Scrub Plants.</b> National Science Foundation (Co PI). Shared with E.S Menges	\$100,002
2006-2009	<b>Interactive effects of cattle grazing, fire and rangeland management on wetland ecosystems.</b> U.S Dept. of Agriculture National Research Initiative Managed Ecosystems (Co PI). Shared with D. Jenkins, J. Fauth, and P. Bohlen	\$290,814
2006-2009	<b>Seed germination and seedling survival of <i>Eryngium cuneifolium</i>, <i>Hypericum cumulicola</i>, <i>Liatris ohlingerae</i>, <i>Paronychia chartacea</i>, and <i>Polygonella basiramia</i> in natural and disturbed scrub habitats.</b> Florida Department of Agriculture and Consumer Services (PI)	\$62,574
2005-2008	<b>Population viability analysis of <i>Polygonella myriophylla</i> in roads and Florida scrub with different times-since-fire.</b> USFWS South Florida Ecological Services (Co-PI). Shared with C. Parkinson	\$127,631
2004	<b>Population viability analysis of the annual <i>Warea carteri</i> and the short lived <i>Polygonella basiramia</i> in Florida scrub with different times-since-fire.</b> Archbold Biological Station (PI)	\$ 15,292

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**RESEARCH GRANTS OBTAINED WHILE AT OTHER INSTITUTIONS**

<b>YEARS</b>	<b>TITLE / DONOR INSTITUTION</b>	<b>AMOUNT</b>
2002-2003	<b>Spatially explicit disturbance-demographic models for federally listed Florida scrub plant species.</b> U.S. Fish and Wildlife Service, USA	\$ 45,000
2000-2001	<b>Compare the population dynamics of <i>Hypericum cumulicola</i> in various habitats and with different time-since-fire.</b> The Division of Forestry, Florida Department of Agriculture & Consumer Services	\$ 17,150
1999-2000	<b>Compare the population dynamics of <i>Hypericum cumulicola</i> in various habitats and with different time-since-fire.</b> The Division	\$ 24,500

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	of Forestry, Florida Department of Agriculture & Consumer Services,	
1995-1996	<b>Survivorship, growth and fecundity of three narrowly endemic plants in competitive neighborhoods along a fire disturbance gradient.</b> The Division of Forestry, Florida Department of Agriculture & Consumer Services	\$ 4,625
1994-1995	<b>Survivorship, growth and fecundity of three narrowly endemic plants in competitive neighborhoods along a fire disturbance gradient.</b> The Nature Conservancy	\$2,500

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## SUMMARY OF PUBLICATIONS, AND PRESENTATIONS

I have broad experience in ecology, restoration ecology, conservation biology, computer simulation and applied statistics. My contributions include **one book (hard cover and paperback)**, **108 publications** in specialized peer-reviewed journals, and **eight book chapters**. I have regularly contributed talks or posters to academic conferences including those of the Ecological Society of America and the Society for Conservation Biology. I have been invited as a seminar speaker to 47 institutions. I enjoyed or maintain research collaborations with colleagues in the Biology Department, UCF, St. Johns Water Management District, University of Florida (UF), Archbold Biological Station (USA), Universidad Autónoma de Barcelona, Estación Biológica Doñana, Universidad de Valladolid, Universidad Rey Juan Carlos (Spain), El Colegio de la Frontera Sur (México), Universidad Técnica Particular de Loja, Loja (Ecuador), Melbourne University, Victoria (Australia), and University of Oxford (GB).

In May 2024

Google Scholar listed overall **5775 citations** of my work, **h-index = 37 and i10-index = 81 (19 and 46 since 2019)**

### PUBLISHED BOOK:

*Quintana-Ascencio P.F.*, F López-Borghesi, E.S. Menges. 2022. **Statistical Modeling for Naturalists**. Cambridge Scholars Publishing. Newcastle. United Kingdom.

ISBN (10): 1-5275-8950-1

ISBN (13): 978-1-5275-8950-6

### PUBLISHED RESEARCH PAPERS:

#### 2024

108. López-Borghesi, F., *P. F. Quintana-Ascencio*. 2024 The Omission of Seed Banks in Demography as an Example of Bias in Ecology. **Bioscience**, <https://doi.org/10.1093/biosci/biae042>.

107. Vélez-Mora DP, Trigueros-Alatorre K, Duncan D, *Quintana-Ascencio PF*. 2024. Plant size, elevation, and nutrients affect flowering synchrony, which increases reproduction in a key shrub of the inter-Andean dry shrubland. **American Journal of Botany**, *accepted*.

106. *Quintana-Ascencio, P.F.* J. Navarra, H. Rosner-Katz and C. Knothe. 2024. The geometry of persistence: allometry improves demographic analysis of a species translocated to contrasting environments. **Natural Areas Journal**, 44: 87-97.

#### 2023

105. Guo, Y, E. H. Boughton, S. Bohlman, C. Bernacchi, P. J. Bohlen, R. Boughton, E DeLucia, John

- E. Fauth, N. Gomez-Casanovas, D. G. Jenkins, G. Lollis, R. S. Miller, P.F. Quintana-Ascencio, G. Sonnier, J. Sparks, H. Swain, J. Qiu. 2023. Agricultural intensification alters multifunctionality of metaecosystems. **Nature Communications**, DOI: 10.1038/s41467-023-44104-2.
104. Hindle, B.J., P. F. Quintana-Ascencio, E. S. Menges and D. Z. Childs. 2023. Managing disturbance dependent populations under a changing climate; the implications of seasonal climatic effects. **Journal of Ecology** DOI: 10.1111/1365-2745.14143
103. Koontz, S. M., F. López-Borghesi, S. A. Smith, S. Haller Crate, P. F. Quintana-Ascencio, E. S. Menges. 2023. Estimating vital rate variation to assess early success of scrub mint translocations. **Conservation Science and Practice**, DOI: 10.1111/csp2.12934
102. López-Borghesi, F., S. M. Koontz, S. A. Smith, S. Haller Crate, P. F. Quintana-Ascencio, E. S. Menges. 2023 Leveraging projection models to evaluate long-term dynamics of scrub mint translocations. **Conservation Science and Practice**, DOI: 10.1111/csp2.12947

## 2022

101. Stahelin, G., P. F. Quintana-Ascencio, E. Hoffman, M. Reusche, K. Mansfield. 2022 Using distance metrics and temporal trends to refine mixed stock analyses. **Scientific Reports**, <https://doi.org/10.1038/s41598-022-24279-2>
100. Biazzo, I, P. F. Quintana-Ascencio. 2022. Canopies, the final frog-tier: exploring responses of a specialist treefrog to prescribed fire in a pyrogenic ecosystem. **Fire Ecology** 18-24, <https://doi.org/10.1186/s42408-022-00148-1>
99. Vélez-Mora D.P., E. Gusmán, C. I. Espinosa and P. F. Quintana-Ascencio. 2022. Changes in climate, nutrients and grazing pressure threaten integrity and functioning of Andean shrublands. **Plant Ecology & Diversity**, 10.1080/17550874.2022.2122753

## 2021

98. Li, H., E. H. Boughton, D. G. Jenkins, G. Sonnier & P. F. Quintana-Ascencio. 2021. Multiple spatial scales affect direct and indirect interactions between a non-native and a native species. **Plant Ecology**, <https://doi.org/10.1007/s11258-021-01182-w>.
97. Vélez-Mora D.P., Trigueros, K., P. F. Quintana-Ascencio. 2021. Evidence of morphological divergence and reproductive isolation in a narrow elevation gradient. **Evolutionary Biology**, 48: 321-334. <https://doi.org/10.1007/s11692-021-09541-1>
96. García-Cervigón, A.I, P. F. Quintana-Ascencio, A. Escudero, M. E. Ferrer-Cervantes, A. M. Sánchez, J. M. Iriondo and J. M. Olano. 2021. Demographic effects of interacting species: exploring stable coexistence under increased climatic variability in a semiarid shrub community. **Scientific Reports**, <https://www.nature.com/articles/s41598-021-82571-z>.
95. Coutts, S.R., P.F. Quintana-Ascencio, E.S. Menges, R Salguero-Gómez & D. Childs. 2020. The magnitude of fine-scale spatial variation in fitness is comparable to disturbance induced fluctuations in a fire-adapted herbaceous perennial, **Ecology**, 102: e03287; doi: 10.1002/ecy.3287

**2020**

94. Boughton, E.H., P. F. *Quintana-Ascencio* & P.J. Bohlen. 2020. Grazing and microhabitat interact to affect plant interactions in subtropical seasonal wetland. **Journal of Vegetation Science**, DOI: 10.1111/jvs.12962
93. Vélez-Mora, D.P., P. Ramón, C. Vallejo, A. Romero, D. Duncan, P. F. *Quintana-Ascencio*. 2020. Environmental drivers of femaleness of an inter-Andean monoecious shrub **Biotropica**. 53: 17-27, DOI: 10.1111/btp.12839.
92. Sonnier, G., P. F. *Quintana-Ascencio*, P. J. Bohlen, J. E. Fauth, D. G. Jenkins, E. H. Boughton. 2020. Pasture management, grazing, and fire interact to determine wetland 1 provisioning in a subtropical agroecosystem. **Ecosphere** 11(8): e03209. 10.1002/ecs2.3209
91. Carrillo Arreola, F., P. F. *Quintana-Ascencio*, N. Ramírez-Marcial and M. González-Espinosa. 2020. Seed rain and establishment in successional forests in Chiapas, Mexico. **Acta Botanica Mexicana** 127: e1618. DOI: 10.21829/abm127.2020.1618
90. Jenkins, D. G., & P. F. *Quintana-Ascencio*. 2020. A solution to minimum sample size for regressions. **PLOS**, 229345.

**2019**

89. Sánchez-Clavijo L.M., N.J. Bayly & P. F. *Quintana-Ascencio*. 2019. Habitat selection in transformed landscapes and the role of forest remnants and shade coffee in the conservation of resident birds. **Journal of Animal Ecology**, 89 (2) 553-564, [https://doi: 10.1111/1365-2656.13108](https://doi.org/10.1111/1365-2656.13108)
88. *Quintana-Ascencio, P.F.* Koontz, S.M., Ochocki, B., Sclater, V. L., López-Borghesi, F., Li, H. & E. S Menges. 2019. Assessing the roles of seed bank, seed dispersal and historical disturbances for metapopulation persistence of a pyrogenic herb. **Journal of Ecology**, 107: 2760-2771. <https://doi.org/10.1111/1365-2745.13206>. **Editors' choice: Journal of Ecology: Vol 107, No 6 (wiley.com)**
87. David, A., P.F. *Quintana-Ascencio*, E.S. Menges, K. Thapa-Magar, M. Afkhami, & C. Searcy. 2019. Soil microbiomes underlie population persistence of an endangered plant species. **The American Naturalist**, 194 (4): 488-494. <https://doi.org/10.1086/704684>.
86. Boughton, E. H., P. F. *Quintana-Ascencio*, D. G. Jenkins, P. J. Bohlen, J. E. Fauth, A. Engel, G. Hendricks, G. Kiker, S. Shukla, & H. M. Swain. 2019. Tradeoffs and synergies in a payment-for-ecosystem services program on ranchlands in the Everglades headwaters. **Ecosphere** 10(5): e02728. 10.1002/ecs2.2728.
85. Espinosa C.I, D.P. Vélez-Mora, P. Ramón, E. Gusmán Montalván, D.H. Duncan, & P.F. *Quintana-Ascencio*. 2019. Intraspecific interactions affect the spatial pattern of a dominant shrub in a semi-arid scrubland: a prospective approach. **Population Ecology**, 61, 217-226. DOI: 10.1002/1438-390X.1018.

**2018**

84. Hindle B.J., M. Rees, A.P. Beckerman, A.W. Sheppard, P. F. *Quintana-Ascencio*, E. S. Menges & D. Z. Childs. 2018. Incorporating environmental quality into stochastic demographic models. **Methods in Ecology and Evolution**, DOI: 10.1111/2041-210X.13085.



83. Horn K.D., E.S. Menges, & P. F. Quintana-Ascencio. 2018. Responses of the clonal endemic shrub *Polygonella myriophylla* to fire and mechanical disturbance. **American Midland Naturalist**, 180: 175-188.
82. Quintana-Ascencio P. F. & E. S. Menges. 2018. Demographic measures of *Hypericum cumulicola* (Hypericaceae) in 15 populations in Florida Rosemary Scrub patches with different time-since-fire, at Archbold Biological Station, Highlands County, Florida from 1994-2015. **Environmental Data Initiative**.  
<http://dx.doi.org/10.6073/pasta/fb8661cc0af964a4c5caace85b72b036>
81. Quintana-Ascencio, P.F. Koontz, S., Smith, V., David, A., Sclater, V. L. & E. S Menges. 2018. Predicting landscape-level distribution and abundance: Integrating demography, fire, elevation, and landscape habitat configuration. **Journal of Ecology**, 106: 2395-2408. DOI: [org/10.1111/1365-2745.12985](https://doi.org/10.1111/1365-2745.12985)
80. Yin, T., D Gooding, L.M. Castro Morales, D. Wang, P. F. Quintana-Ascencio, D. Hall, & J. E. Fauth. 2018. Effect of Herbicides on Evapotranspiration of Willow Marshes in the Upper St. Johns River basin, East-central Florida. **Journal of Hydrologic Engineering**. DOI: [10.1061/\(ASCE\)HE.1943-5584.0001685](https://doi.org/10.1061/(ASCE)HE.1943-5584.0001685).
- 2017**
79. Menges, E. S., S. J.H. Crate, & P. F. Quintana-Ascencio. Dynamics of gaps, vegetation, and plant species with and without fire. 2017 **American Journal of Botany**. 104, 1825-1836. Selected as a “noteworthy article” in the AJB's “Highlights” section by the Editor
78. de la Cruz, Marcelino, Pedro F. Quintana-Ascencio, Luis Cayuela, Carlos I. Espinosa, & Adrián Escudero. 2017. Comments on “The extent of forest in dryland biomes”. **Science**, 358: DOI: [10.1126/science.aao0369](https://doi.org/10.1126/science.aao0369)
77. Pierre, S.P., P.F. Quintana-Ascencio, E. H. Boughton, & D. G. Jenkins. 2017. Dispersal and local environment affect the spread of an invasive Apple Snail (*Pomacea maculata*) in Florida, USA. **Biological Invasions**, 19: 2647-2661.
76. Tye MT, Ferrer-Cervantes, M E., Sánchez, AM., García-Cervigón, AI, Escudero A, Albert MJ, Olano JM, Iriando JM & PF Quintana-Ascencio. 2017. Assessing seed and microsite limitation on population dynamics of a gypsophyte through experimental soil crust disturbance and seed addition. **Plant Ecology**, 218: 595-607. doi: [10.1007/s11258-017-0714-1](https://doi.org/10.1007/s11258-017-0714-1)
75. Paniw, M., P. F. Quintana-Ascencio, F. Ojeda, & R. Salguero-Gómez. 2017. Interacting livestock and fire may both threaten and increase viability of a fire-adapted Mediterranean carnivorous subshrub. **Journal of Applied Ecology**, doi: [10.1111/1365-2664.12872](https://doi.org/10.1111/1365-2664.12872)
74. Paniw, M., P F. Quintana-Ascencio, F. Ojeda, & R. Salguero-Gómez. 2017. Accounting for uncertainty in dormant life stages in stochastic demographic models. **Oikos**, 126: 900-909, doi: [10.1111.oik.03696](https://doi.org/10.1111.oik.03696)
73. Walters, L., Makris, P., Anderson, L., Quintana-Ascencio, P.F. & Sacks, P. 2017. Where have all the Oysters Gone? Multiple Stressors Impacting Estuarine Oysters. In Integrative and Comparative Biology. Vol. 57, pp. E173-E173.

**2016**

72. Tye, M. R., E. S. Menges, C. Weekley, P. F. Quintana-Ascencio, & R. Salguero-Gómez. 2016. A demographic ménage à trois: interactions between disturbances both amplify and dampen population dynamics of an endemic plant. **Journal of Ecology**, 104: 1778-1788.
71. Ulrey, C., *Quintana-Ascencio, P.F.*, Kauffman, G., Smith, A.B., & E. S. Menges. 2016. Life at the top: Long-term demography, microclimatic refugia, and responses to climate change for a high-elevation southern Appalachian endemic plant. **Biological Conservation**, 200: 80-92.
70. Chee, Y. E., L. Wilkinson, A. E. Nicholson, *P. F. Quintana-Ascencio*, J. E. Fauth, D. Halle, K. J. Ponzio, & L. Rump. 2016. Modelling spatial and temporal changes with GIS and Spatial and Dynamic Bayesian Networks. **Environmental Modelling and Software**, 82: 108-120.
69. Sánchez-Clavijo, L.M., Hearn, J. & *P. F. Quintana-Ascencio, P.F.* 2016. Modelling the effect of habitat and cue-based selection mechanisms on population responses to landscape structure. **Ecological Modeling**, 328: 99-107.
68. Boughton, E. H., *Quintana-Ascencio, P. F.*; B., Patrick; Fauth, J., & Jenkins, D. 2016. Interactive effects of pasture-management intensity, release from grazing, and prescribed fire on forty subtropical wetland plant assemblages. **Journal of Applied Ecology**, 53:159-170.

**2015**

67. Stephens, E. L., & *Quintana-Ascencio, P. F.* 2015. Effects of habitat degradation, microsite, and seed density on the persistence of two native herbs in a subtropical shrubland. **American Journal of Botany**, 102:1978-1995.
66. Medley, K. A., Boughton, E.H., D. G. Jenkins, J. E. Fauth, P. J. Bohlen & *P. F. Quintana-Ascencio*. 2015, Intense ranchland management tips the balance of regional and local factors affecting wetland community structure. **Agriculture, Ecosystems and Environment**, 212: 207-244.
65. Pannozzo P.L., *P. F. Quintana-Ascencio* C.R. Hinkle, & R. F. Noss. 2015. Are state growth management programs viable tools for biodiversity conservation? A case study examining Florida local governments. **Landscape and Urban Planning**, 139: 94-103.

**2014**

64. Ceriani, S.A., Roth, J.D., Ehrhart, L.M., *Quintana-Ascencio P.F.*, & Weishampel, J.F. 2014. Developing a common currency for stable isotope analyses of nesting marine turtles. **Marine Biology** 161:2257-2268. Doi: 10. 1007/s00227-014-2503-x
63. Stephens, E.L., Tye, M.R., & *Quintana-Ascencio P.F.*, 2014. Habitat and microsite influence demography of two herbs in intact and degraded scrub. **Population Ecology** 56:447-461.
62. Castro Morales L. M., *Quintana-Ascencio P.F.*, J. E. Fauth, K. J. Ponzio, & D. Hall. 2014. Environmental factors affecting germination and seedling survival of Carolina willow (*Salix caroliniana*). **Wetlands**, 34:469-478. Doi:10.1007/s13157-014-0513-6

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**PAPERS USING MY DATA IN WHICH I AM NOT COAUTHOR**

Doak, D.F., Waddle, E., Langendorf, R. E., Louthan, A.M. Chardon, N.I., Dibner, R.R. Keinath, D.A., Lombardi, E., Steenbock, C., Shriver, R.K., Linares, C., García M.B., Funk W.C., Fitzpatrick, S.W., Morris, W.F., Peterson M.L. 2021. A critical comparison of integral projection and matrix projection models for demographic analysis. **Ecology** doi: 10.1002/ECM.1447. (*Hypericum cumulicola*)

Ellis, M.M. and E.E. Crone. 2013. The role of transient dynamics in stochastic population growth for nine perennial plants. **Ecology** 94:1681-1686. (*Hypericum cumulicola*)

Metcalf, C.J., S.M McMahon, R. Salguero-Gomez, and E. Jongejans. 2012. IPMpack: an R package for integral projection models. **Methods in Ecology and Evolution** (*Hypericum cumulicola*)

Salguero-Gomez, R. and B.B. Casper. 2010. Keeping plant shrinkage in the demographic loop. **Journal of Ecology** 98:312-323. (*Hypericum cumulicola*)

Buckley, Y.M., S. Ramula, S.P. Blombert, J.H. Burns, E.E. Crone, J. Ehrlen, T.M. Knight, J-B Pichancourt, H. Quested, and G.M. Wardle. 2010. Causes and consequences of plant population growth rate: a synthesis of matrix population models in a phylogenetic context. **Ecology Letters** 13:1182-1197. (*Hypericum cumulicola*).

Jops, K and J.P. O'Dwyer. 2023. Life history complementary and the maintenance of biodiversity. **Nature**. <https://doi.org/10.1038/s41586-023-06154-w>. (*Hypericum cumulicola*)

**DATABASES PUBLISHED/POSTED**

*Hypericum cumulicola*, one site, annual, 1994-2015 (ongoing), individual plants  
Posted 2018-3-22

EDI: <https://portal.edirepository.org/nis/mapbrowse?packageid=edi.181.1>  
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**RESEARCH REPORTS**

Quintana-Ascencio P. F and E. S. Menges. (Based on data collected by W. R. Smith and Nancy P. Sather). 2002. Population modeling for the prairie bush clover *Lespedeza leptostachya*. Minnesota Natural Heritage and Nongame Research Program, St. Paul, Minnesota.

Quintana-Ascencio P. F and E. S. Menges. (Based on data collected by Christopher Ulrey). 2020. Population viability of the Blue Ridge endemic *Liatris helleri*. Blue Ridge Parkway, National Park Service. Ashville, North Carolina.

**TALKS IN ACADEMIC SEMINARS (by invitation)**

2023 **University of Florida**. Robert D. Holt laboratory seminars, Gainesville, Florida, US  
2019 **Oxford University, Department of Zoology**, Oxford, Great Britain  
2018 **Corkscrew Swamp Sanctuary**, Audubon, Florida, US  
2017 **Archbold Biological Station**, Lake Placid, Florida. US  
2016 **The University of Sheffield**, Great Britain

- 2016 **University of Miami, Miami**, Florida, US
- 2016 **Universidad Técnica Particular de Loja**, Loja, Ecuador
- 2014 **University of Central Florida**, Orlando, Florida, US
- 2014 **Archbold Biological Station**, Lake Placid, Florida. US
- 2013 **Florida Rare Plant Task Force Meeting**, Lake Wales, Florida, US
- 2012 **University of Central Florida**, Orlando, Florida, US  
(*Graduate student's seminar speaker selection Fall- 2012*)
- 2012 **Archbold Biological Station**, Lake Placid, Florida. US
- 2012 **St Johns Water Management District**, Palatka, Florida. US
- 2012 **Universidad de Antioquía**, Medellín, Colombia
- 2012 **Universidad Técnica Particular de Loja**, Loja, Ecuador
- 2012 **Arthur Rylah Institute for Environmental Research**. Heidelberg, Victoria, Australia
- 2012 **School of Botany, (ACERA), University of Melbourne**, Melbourne, Victoria, Australia
- 2011 **Instituto Pirenaico de Ecología (IPE/CSIC)**, Zaragoza, Spain
- 2011 **Universidad Rey Juan Carlos**, Móstoles, Spain
- 2011 **Universidad de Cádiz**, Cádiz, Spain
- 2011 **Universidad Internacional Meléndez Pelayo**, Huesca, Spain
- 2011 **Max-Planck Institute for Demographic Research**, Rostock, Germany
- 2011 **Universidad de Alcalá**, Alcalá de Henares, Spain
- 2011 **Universidad de Antioquia**, Medellín, Colombia
- 2010 **St Johns Water Management District**, Palatka, Florida. US
- 2009 **The Joseph W. Jones Ecological Research Center**, Ichaway, Georgia, US
- 2008 **University of Central Florida**, Department of Biology, Orlando, Florida, US
- 2008 **University of Florida**, Department of Wildlife Ecology and Conservation, Florida, US
- 2008 **University of Vermont**, Biology Department, Burlington, Vermont, US
- 2007 **Universidad Rey Juan Carlos**, Móstoles, Madrid, Spain
- 2007 **Estación Biológica Doñana**, Sevilla, Spain
- 2007 **The Joseph W. Jones Ecological Research Center**, Ichaway, Georgia, US
- 2006 **University of Missouri-Columbia**, Department of Botany, Columbia, Missouri, US
- 2005 **University of South Florida**, Department of Biology. Tampa, Florida, US
- 2005 **University of Central Florida**, Department of Mathematics, Orlando, Florida, US
- 2005 **Florida International University**, Dept. of Biological Sciences. Miami. Florida, US
- 2005 **Universidad Rey Juan Carlos**, Móstoles, Madrid, Spain
- 2005 **Centre de Recerca Ecològica i Aplicacions Forestals**, Barcelona, Catalunya, Spain
- 2005 **University of Central Florida**, Department of Biology, Orlando, Florida, US
- 2004 **Kennedy Space Center**, Fl 32899, US
- 2004 **University of Miami**, Department of Biology. Coral Gables, Florida, US
- 2003 **Florida Rare Plant Task Force**. Successful Rare Plant Conservation. The Enchanted Forest. Titusville, Florida, US
- 2002 **Prairie Bush-Clover Conservation and recovery status Conference**. U.S. Fish and Wildlife Service. Mines of Spain State Park, Dubuque, Iowa, US
- 1997 **University of Miami**, Department of Biology, Miami, Florida, US
- 1997 **State University of New Jersey**, Rutgers, New Jersey, US
- 1996 **Center for Plant Conservation**, Denver, Colorado, US
- 1992 **Universidad Autónoma del Estado de México**, Escuela de Biología, Estado de México
- 1991 **Instituto Chiapaneco de Cultura**. Gob. Edo. Tuxtla Gutiérrez, Chiapas. México
- 1991 **Universidad Autónoma Metropolitana. México**, Departamento de Biología de la Reproducción, Unidad Iztapalapa, D.F. México

**PRESENTATIONS AT PROFESSIONAL MEETINGS (ONLY INCLUDED THOSE AS FIRST AUTHOR):**

Quintana-Ascencio, P. F. La geometría de la persistencia: la consideración de relaciones alométricas puede mejorar los análisis demográficos. VIII Congreso Mexicano de Ecología. Oaxaca, México. May 2022.

Quintana-Ascencio, P. F, S.M. Koontz, B. Ochocki, López-Borghesi, F. Haoyu, L., V. Sclater, E.S Menges. Assessing the roles of seed bank and seed dispersal for metapopulation viability of a pyrogenic herb. Monitoring and modeling. Distributions & Environmental Change. International Conservation Biology Meeting. Kuala Lumpur, Malasya. July 2019.

Quintana-Ascencio P.F., C. I Espinosa, D.P. Vélez-Mora, P. Ramón, E. Gusmán Montalván, D.H. Duncan. Intraspecific interactions affect the spatial pattern of a dominant shrub in a semi-arid scrubland: a prospective approach. Ecological Society of America Meeting. New Orleans, Louisiana, USA. August 2018.

Quintana-Ascencio, P F, Tang Y, Wang D, Fauth J, Hall D. Using Bayesian networks to evaluate Carolina willow evapotranspiration levels in the St. Johns River after management with fire and herbicides, USJRB Research & Management Consortium 3rd Annual Meeting. Palm Bay, Florida, USA. April 2017.

Quintana-Ascencio, P. F, S.M. Koontz, S.A. Smith, V. Sclater, E.S Menges. Predicting landscape-level distributions and abundances : integrating demography, fire and hydrology with patch and annual variation. Population Ecology. Distributions & Environmental Change. British Ecological Society Annual Meeting, Liverpool, United Kindom. December 2016.

Quintana-Ascencio, P F, Tang Y, Wang D, Fauth J, Hall D, Ponzio K. Evaluación de la contribución del sauce a la evapotranspiración en matorrales de la cuenca alta del río St. Johns, Florida, USA. Segundo Congreso Latinoamericano de IALE, Temuco, Cautin, Chile. November 2016.

Quintana-Ascencio, P. F, S.M. Koontz, S.A. Smith, V. Sclater, E.S Menges. Predicting landscape-level distributions: integrating demography, fire and hydrology with patch and annual variation. Organized Oral Session. Landscape demography. Ecological Society of America Meeting., Fort Lauderdale, Florida, USA. August 2015.

Quintana-Ascencio, P. F, E.S Menges, C.W. Weekley, S.A. Smith, S.M. Koontz, J. Navarra. Demographic differences between road and scrub populations of Florida Scrub Plants. Organized Oral Session. Demographic buffering beyond the confort zone: species' responses to anthropogenic disturbances. 2015 Ecological Society of America Meeting. Baltimore, Maryland, USA. August 2015.

Quintana-Ascencio, P. F and M Tye. Interactive effects of herbivores, habitat and fire on the population dynamics of a rare plant endemic to the Florida Scrub. Demography beyond the Population", March 23rd - 26th, 2015 in Sheffield, UK

Quintana-Ascencio, P. F, L. Sanchez-Clavijo and J. Hearn. Modelando las consecuencias ecológicas de la selección de hábitat por parte de aves en bosques y cafetales de sombra. V Congreso Mexicano de Ecología, San Luis Potosí, SLP, México. Abril 24, 2015.

Quintana-Ascencio, P. F, E. Stephens and M Tye. Efecto de hábitat y micrositios sobre la demografía de dos especies del matorral de Florida. IV Congreso Mexicano de Ecología, Villahermosa, Tabasco, México. Marzo 18, 2013.

Quintana-Ascencio, P. F., L. Castro Morales and J. Fauth. Early survival and growth experiments with willow seedlings and cuttings. 12th European Ecological Federation Congress. Avila, Spain. September 25-29, 2011.

Quintana-Ascencio, P. F., J. Fauth L. Castro Morales. Supervivencia y crecimiento de plantulas y vástagos de sauce de Carolina en islas artificiales. III Congreso Mexicano de Ecología, Boca del Río, Veracruz, México. Abril 6, 2011.

Quintana-Ascencio, P. F., G. Oostermeijer, E. S. Menges, T. Kaye, T. Bell. Assessing environmental driven demographic change for plant management and conservation. 23rd Annual meeting of the Ecological Society of Germany, Switzerland and Austria; section Plant Population Biology. Nijmegen, Netherlands. May 13, 2010

Quintana-Ascencio, P.F., E.S. Menges, C.W. Weekley, M. Kelrick, B Pace-Aldana. Demographic models predicting biennial population cycles in the annual *Warea carteri*. Annual Meeting of the British Ecological Society, Glasgow, UK, September 2007.

Quintana-Ascencio, P.F., Caballero, I., Olano, J.M., Escudero A., Albert, ¿M.J. Does habitat structure matter? Spatially explicit population modelling of the gypsum endemic, *Helianthemum squamatum*. 91st Annual Meeting of the Ecological Society of America, Memphis Tennessee, USA, August 5, 2006.

Quintana-Ascencio, P.F., R. W. Dolan, E. S. Menges & K. Aaltonen. Effects of fire on spatial pattern of genetic variation in *Hypericum cumulicola*. International Association of Vegetation Science, Lisbon, Portugal. July 2005.

Quintana-Ascencio, P. F., and E. S. Menges. Spatially explicit disturbance-demographic model for a federally-listed Florida scrub plant species. 68th Annual Meeting of the Florida Academy of Sciences Orlando, Florida, USA. March 2004.

Quintana-Ascencio, P.F. and E. S. Menges. 2004. A spatially-explicit individual-based model of post-fire Florida rosemary and Scrub *Hypericum* population dynamics. 18 th Annual Meeting Society for Conservation Biology, New York, New York, USA..

Quintana-Ascencio, P. F., E. S. Menges, C. W. Weekley, O. Gande Gaoue. 2003. Demographic variation with fire in an endemic mint. 88 th Annual Meeting of the Ecological Society of America, Location: Savannah, Georgia, USA. August 2003.

Quintana Ascencio, P.F. and Menges, E.S. 2003. Fire effects on scrub buckwheat individuals, seedling recruitment, and population viability. 87th Annual Meeting of the Ecological Society of America, Tucson, Arizona, USA, August 5, 2002. Abstracts: 318.

Quintana-Ascencio, P. F., E. S. Menges, and R. W. Dolan. 2002. Spatial pattern of genetic variation in *Hypericum cumulicola*: implications for management. 16 th Annual Meeting of the Society for Conservation Biology. Canterbury, Kent, England, July 14-July 19, 2002. Abstracts: 117.

Quintana-Ascencio, P. F. and E. S. Menges. 2001. Population viability of *Eryngium cuneifolium* in Florida scrub under different fire regimes. Florida Scrub Symposium 2001. United States. Department of Interior. Fish and Wildlife Service, Radisson Plaza Hotel, Orlando, Florida, USA. July 5-7, 2001. Abstracts: 15.

Quintana-Ascencio, P. F. and E. S. Menges. 2001. Evaluating population viability analysis with fire in *Eryngium cuneifolium*: deciphering a decade of demographic data. 15 th Annual Meeting of the Society for Conservation Biology. Hilo, Hawaii, USA July 29-August 1, 2001.

Quintana-Ascencio, P. F., C. W. Weekley, and A. Camacho Cruz. 2000. *Hypericum cumulicola* population dynamics in human modified and natural habitats. 14th Annual Meeting of the Society for Conservation Biology. Missoula, Montana, Abstracts: 242.

Quintana-Ascencio, P. F. and E. S. Menges. 1999. Extinction probabilities of a rare species under variable fire regimes. Population Viability Analysis: assessing models for recovering endangered species, San Diego, California, USA. Abstracts: 49.

Quintana-Ascencio, P. F. and E. S. Menges. 1998. Population viability analysis of *Hypericum cumulicola* in Florida rosemary scrub with variable fire regimes. 83rd Annual Ecological Society of America meeting. Baltimore, Maryland, USA. Abstracts 77: 108.

Quintana-Ascencio, P. F. and M. Morales Hernández. 1996. Fire dependent survivorship, growth, and fecundity of *Hypericum cumulicola* in the patchy Florida rosemary scrub. 81st Annual ESA meeting. Providence, Rhode Island, USA. Bulletin of the Ecological Society of America 77: 364.

Quintana-Ascencio, P. F. and E. S. Menges. 1995. Inferring metapopulation dynamics from patch-level incidence of Florida scrub plants. 80th Annual ESA meeting. Snowbird, Utah, USA. Bulletin of the Ecological Society of America 76: 220.

Quintana-Ascencio, P. F., M. González-Espinosa, N. Ramírez-Marcial, G. Domínguez, and F. Carrillo-Arreola. 1994. La regeneración de comunidades sucesionales en áreas de agricultura de milpa de la selva Lacandona, Chiapas, México. International Meeting of the Society for Conservation Biology and the Association for Tropical Biology, Guadalajara, Jalisco, Mexico.

Quintana-Ascencio, P. F., N. Ramírez-Marcial, M. González-Espinosa, F. Carrillo Arreola and G. Domínguez-Vázquez. 1992. Regeneration of tropical rain forest species in disturbed habitats of the Selva Lacandona, southern Mexico. 77th Annual ESA meeting. Honolulu, Hawaii, USA. Bulletin of the Ecological Society of America 73: 313.

Quintana-Ascencio, P. F. and M. González-Espinosa. 1990. Remoción de bellotas y sobrevivencia de plántulas de *Quercus crispipilis* en bosques fragmentados de Los Altos de Chiapas, México. Simposio: Interacciones plantas-animal. V. Congreso Latinoamericano de Botánica. Ciudad de La Habana, Cuba.

Quintana-Ascencio, P. F. and M. González-Espinosa. 1990. Remoción de bellotas y sobrevivencia de plántulas de *Quercus crispipilis* en bosques fragmentados de Los Altos de Chiapas, México. Ecología de Poblaciones. XI Congreso Mexicano de Botánica, Oaxtepec, Morelos, México.

Quintana-Ascencio P. F. and M. González-Espinosa. 1984. Dispersión de las semillas de nopal (*Opuntia* spp.) por animales silvestres y domésticos en El Gran Tunal, San Luis Potosí. Avances en la Enseñanza e Investigación en el Colegio de Postgraduados. Chapingo, México.

#### TEACHING EXPERIENCE:

**Teaching Philosophy:** I describe my teaching philosophy as one that allows me to dialogue with people in an opportunity to increase our ability to explore, enjoy and understand the universe. I start by recognizing that I am also learning and that in the process of presenting and evaluating facts and values, everybody has relevant previous experiences and information. I recognize the diversity of experiences and background of other people and adapt my role to promote the maximum achievement from everyone. I encourage reexamining our backgrounds in the context of learning new information. In this way, we expose and discard our preconceptions and misinterpretations, and take advantage of available skills and information. I recognize that the best way of learning is by practice. As much as possible, I create situations that allow the evaluation of the facts behind the studied principles. As a science teacher, I maintain and promote skeptical thinking. It is fundamental that science students learn to discern testable statements on repeatable actions open to rejection and confirmation. Because of the probabilistic nature of phenomena in my field, I emphasize the use of statistics as a rigorous tool for contrasting hypotheses and evaluating alternative ideas. I strongly believe that learning is an individual responsibility and encourage independent study and exploration beyond what we share in class. I am also always open to suggestions and promote continuous discussion and collaboration. I encourage mutual criticism and the interchange of information. I feel fortunate to have the opportunity to share my passion for understanding the relationships between living organisms and the development of principles for practical environmental problems.

#### **COURSES TAUGHT AT THE UNIVERSITY OF CENTRAL FLORIDA**

More information can be obtained at: <https://sciences.ucf.edu/biology/d4lab/614-2/#>

<b>Terms</b>	<b>Course #</b>	<b>Course Taught</b>	<b>Enrollment</b>
Spring 2009, 2010, 2011, 2013, 2015	PCB 6048	Restoration Ecology	3, 3, 4, 12, 3
Spring 2009, 2010, 2011	PCB 7049	Conservation Biology Practice	3, 3, 4
Spring 2022, 2023, 2024	PCB 6042	Conservation Biology Theory	6, 7, 3
Fall 2005, 2006, 2008, 2009 & 2010, 2012, 2013	PCB 5937	Methods in Experimental Ecology I	21, 11, 23, 10, 15, 22, 13
Spring 2015, 2016, 2017, 2018, 2020, 2021, 2022, 2023, 2024	PCB 6468	Methods in Experimental Ecology II	6, 9, 12, 12, 13, 3, 7, 8, 8
Spring 2017	PCB 3044	Honors Ecology	9
Spring 2004, 2006 & 2008	PCB 5480	Quantitative Conservation Biology	4, 8, 4
Spring 2007 & Fall 2007	PCB 6938	Advances in Plant Ecological Research	8, 6
Spring 2003 & Fall 2003, 2004 & 2005	BSC 2011	Biodiversity	224, 286, 222, 231
Spring 2005 & 2007	BOT5623	Plant Geography and Ecology	7, 3
Spring 2020	ENV 1001	Honors Environmental Science	21
Spring 2021	ENV 1001	Environmental Science	172

#### **COURSES TAUGHT AT OTHER INSTITUTIONS**

<b>Terms</b>	<b>Course#</b>	<b>Course Taught</b>	<b>Enrollment</b>
<b>El Colegio de la Frontera Sur, San Cristóbal de Las Casas, Chiapas, México</b>			
Summer 2006	Short course	Los Análisis Demográficos de Viabilidad de Especies	20
Summer 2004 & 2008, 2013	Short course	Métodos de Análisis Estadístico para Ecólogos	10, 12, 14
1998 & 1999	SA-5010	Seminario Avanzado, Estadística	5, 7

1998 & 1999	TS-2040	Biología de la Conservación	10, 12
<b>Facultad de Ciencias, Universidad Nacional Autónoma de México, México</b>			
1983	Short course	Fisiología Vegetal	23
<b>Universidad de Antioquía, Medellín, Colombia</b>			
Summer 2012	Short course	Modelos de Poblaciones	15
<b>Universidad Técnica Particular de Loja, Loja, Ecuador</b>			
Summer 2012	Short course	Modelos de Poblaciones	22
Summer 2014	Short course	Introducción a la Demografía	15
Summer 2015	Short course	Estadística avanzada para profesores de Biología	25
Summer 2016, 2017, 2018	Short course	Estadística avanzada	17, 7, 6
<b>Archbold Biological Station</b>			
November 2016	Short course	Meaningful Cartoons: Analysis and modeling of demographic data for plants	13
<b>Universidad IKIAM, Tena, Ecuador</b>			
Summer 2019	Short course	Modelos de Poblaciones (IPMs)	18

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#### **PARTICIPATION IN CONFERENCES FOR TEACHING IMPROVEMENT:**

SACNAS What Works Conference (2015)	Organized by the International Center for Studies in Creativity, University of New York, Buffalo State with founding from the NSF
Department of Biology, UCF (2007)	In collaboration with Eric Stolen (DYNAMAC Corporation), we organized a two-day short course on Model Selection and Multi-Model Inference by Dr. David R. Anderson (Colorado State University)
Faculty Center for Teaching and Learning University of Central Florida (2006)	Critical review of statistical proficiency in the Biology Graduate Program (with J. E. Fauth and D. Nickerson)
Faculty Institute to Reforming Science & Teaching Conference, Kellogg Biological Station (2005)	Assessing the undergraduate biology curriculum at the University of Central Florida. (with D.G. Jenkins, A Morrison-Shetlar, I.J. Stout, J. Waterman, and J.F. Weishampel)
Faculty Center for Teaching and Learning University of Central Florida (2004)	Assessing the Undergraduate Biology Curriculum at the University of Central Florida (with D.G. Jenkins, A Morrison-Shetlar, I.J. Stout, J. Waterman, and J.F. Weishampel).
Faculty Institute to Reforming Science & Teaching (May 2003)	Faculty workshops in field ecology at Archbold: an opportunity to enrich teaching of ecology for undergraduate students (with D.G. Jenkins, A Morrison-Shetlar, I.J. Stout, J. Waterman, and J.F. Weishampel)

#### **STUDENTS MENTORED:**

I have found that participating in student committees, especially helping with experimental design and statistical analysis, has been particularly rewarding. Since 2003, when I started at UCF, I have graduated five Master students and four PhD students and served in many master's and PhD Committees. I am currently directly supervising a Ph. D. student. Most of my Ph.D.



students and several M.S. students received competitive scholarships, fellowships or awards: Federico López Borghesi **UCF Trustees Doctoral Fellowship, Graduate Teaching Assistant Award at College of Sciences and at the University levels.** Ian Biazzo, **2022 Order of Pegasus, Best Graduate Student (2023)** and **UCF Trustees Doctoral Fellowship,** Lina Sánchez Clavijo, **Fulbright Scholarship,** Elizabeth Boughton **EPA-STAR,** Elizabeth Stephens an **UCF Trustees Doctoral Fellowship** and **Florida Native Plant Society Fellowship,** Jennifer Navarra **The 2009 Beattie Fellowship from The Center for Plant Conservation,** Matthew Tye a **Scholarship for the summer course on Integral Projection Models, at the Max Planck Institute for Demographic Research in Rostock, Germany** and **2015 best Master Thesis at The College of Sciences and the University levels,** and Haoyu Li, **UCF Graduate Dean's Fellowship.**

#### POSTDOCTORAL FELLOWS UNDER MY SUPERVISION

*Merari Esther Ferrer Cervantes, 2012-2013, University of Central Florida*

*Federico López Borghesi 2023-2024. University of Central Florida*

#### LIST OF GRADUATED THESES COMPLETED AT THE *UNIVERSITY OF CENTRAL FLORIDA*

Name	Year	Title	Department
<b><i>As Chair of the Committee (10, 5 PhD)</i></b>			
<i>Federico López Borghesi</i>	2023 PhD	Dormant propagules in demographic studies; A recurrent bias and potential solutions	Biology
<i>Ian Biazzo</i>	2023 PhD	Responses of a pine flatwoods specialist treefrog to prescribed fire	Biology
<i>Haoyu Li</i>	2019 MS	Do per-capita impact or abundance dominate the impact of an invader?	Biology
<i>Lina María Sánchez Clavijo</i>	2016 PhD	Habitat selection in transformed landscapes and the role of novel ecosystems for native species persistence	Biology
<i>Steffan M. Pierre</i>	2015 MS	Does the journey matter more than the destination? The contribution of geospatial characteristics and local conditions to invasive <i>Pomacea maculata</i> distribution across ranchland wetlands	Biology
<i>Matthew Tye</i>	2014 MS	Synergistic effects of biotic interactions and disturbance on plant persistence	Biology
<i>Elizabeth Stephens</i>	2013 PhD	Population dynamics and environmental factors influencing herbs in native and degraded Florida Rosemary scrub	Biology
<i>Jennifer Navarra</i>	2010 MS	Species composition and spatiotemporal pattern of the seed bank and vegetation in native and degraded Florida Rosemary scrub	Biology
<i>Elizabeth. H. Boughton</i>	2009 PhD	Understanding plant community composition in agricultural wetlands: Context dependent effects and plant interactions	Biology

<i>Kristina Horn</i>	2007 MS	Does habitat affect clonal demography? An experiment with <i>Polygonella myriophylla</i> in roadside and Florida scrub.	Biology
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<b><i>As committee member (48)</i></b>			
<b><i>Name</i></b> Ph.D (21)	<b><i>Year</i></b>	<b><i>Title (Some titles are abbreviated)</i></b>	<b><i>Department</i></b>
<i>Alexander Sacco</i>	2024	Multi-scale assessment of oceanic Sargassum habitat for the sea turtle “lost years” ( <i>Major adviser K. Mansfield</i> )	Biology
<i>John Konvalina</i>	2023	Evolutionary history and adaptation to salinity in American alligators ( <i>Alligator mississippiensis</i> ) ( <i>Major adviser Eric Hoffman</i> )	Biology
<i>Katrina Phillips</i>	2022	Juvenile dispersal and genetic connectivity in the sea turtle “lost years” ( <i>Major adviser K. Mansfield</i> )	Biology
<i>Chris A Long</i>	2021	Long-term changes in juvenile green turtle abundance and foraging ecology in the Indian River Lagoon, Florida ( <i>Major adviser K. Mansfield</i> )	Biology
<i>Jordan Dowell</i>	2021	Genetics and evolution of specialized metabolism in wild and cultivated <i>Helianthus</i> ( <i>Major adviser C. Mason</i> )	Biology
<i>Jason W. Bentley</i>	2020	Transfunctions and other topics in measure theory ( <i>Major adviser P. Mikusinski</i> )	Mathematics
<i>Arielle Gaudiello</i>	2019	Mathematical investigation of the spatial spread of an infectious disease in a heterogeneous environment ( <i>Major adviser Z. Shuai</i> )	Mathematics
<i>Joe Waddell</i>	2017	Reproductive life history and signal evolution in a multi-species assemblage of electric fish. ( <i>Major adviser W. Crampton</i> )	Biology
<i>Yin Tang</i>	2017	Annual water balance model based on generalized proportionality relationships and its application ( <i>Major advisor D. Wang</i> )	Civil and Environmental Engineering
<i>Joe Figel</i>	2017	Cross-continental insights into Jaguar ( <i>Panthera onca</i> ) ecology and conservation ( <i>Major adviser R. Noss</i> )	Biology
<i>Gina M Ferrie</i>	2017	Using molecular genetic and demographic tools to improve management of Ex Situ avian populations ( <i>Major adviser E. Hoffman</i> )	Biology
<i>Jeff Sharpe</i>	2016	A mathematical model for feral cat ecology with application to disease ( <i>Major adviser A. Nevai</i> )	Mathematics
<i>Melinda Donnelly</i>	2014	Effects of biotic interactions on coastal wetland communities with applications for restoration ( <i>Major adviser L. Walters</i> )	Biology
<i>Simona A. Ceriani</i>	2014	Migratory connectivity and carry-over effects in Northwest Atlantic Loggerhead	Biology

		turtles ( <i>Caretta caretta</i> , L.) (Major adviser J. Weishampel)	
Pamela L. Panno	2013	Assessing the effectiveness of conservation planning activities of Florida local Governments for long-term biodiversity conservation (Major adviser R. Noss)	Biology
Joyce Marie Brown	2013	Amphibian responses to draining, mechanical shrub removal and prescribed burning in small and isolated wetlands (Major adviser R. Noss)	Biology
Marianne Korosy	2013	Non-Breeding season diet reconstruction and habitat associations among resident and migrant Sparrows in Florida dry prairie (Major adviser R. Noss)	Biology
Kim Medley	2012	Dispersal, gene flow and adaptive evolution during invasion: testing range-limit theory with the Asian Tiger Mosquito (Major adviser D. Jenkins)	Biology
Lisa McCauley	2011	The effects of urbanization on Cypress ( <i>Taxodium distichum</i> ) in Central Florida (Major adviser D. Jenkins)	Biology
David R Breininger	2009	The influence of landcover change on Florida Scrub-Jay population dynamics (Major adviser R. Noss)	Biology
Brean W Duncan	2009	Native Fire Regime as a Reference for Establishing Management Practices (Major adviser R. Noss)	Biology
<b>MS (27)</b>	<b>Year</b>	<b>Title (sometimes are abbreviated)</b>	<b>Department</b>
Jake Kelly	2022	Fibropapillomatosis and chelonid herpesvirus dynamics in juvenile green turtles of the Indian River Lagoon, Florida, USA	Biology
Ryan Welsh	2019	Spatial distribution and abundance of large green turtles on foraging grounds in the Florida Keys, USA.	Biology
Christian Pilato	2019	Hydrodynamic limitations and the effects of living shoreline stabilization on mangrove recruitment along Florida coastlines	Biology
Panayiota Makris	2015	Effects of harmful algal blooms caused by <i>Aureoumbra lagunensis</i> (Brown tide) on larval and juvenile stages of the Eastern Oyster ( <i>Crassostrea virginica</i> )	Biology
Donna E. Campbell	2015	Quantifying the effects of boat wakes on intertidal Oyster reefs in a shallow estuary	Biology
Joshua A. Solomon	2015	Identifying inundation-driven effects among intertidal <i>Crassostrea virginica</i> in a commercially important Gulf of Mexico estuary	Biology
Kirsten Martin	2013	Disturbance-based management and plant species change in Massachusetts sandplain heathlands over the past two decades	Biology
Jessica Hightower	2012	Relating ancient Maya land use legacies to the contemporary forest of Caracol, Belize	Biology

<i>Troy Seiler</i>	2011	Modeling carbon allocation, growth and recovery in oaks experiencing disturbance	Biology
<i>Annalisa Weiler</i>	2011	Factors limiting native species establishment in Former agricultural fields	Biology
<i>Kathryn Becker</i>	2011	Effects of Florida flatwoods ecosystem restoration and management on carbon stock	Biology
<i>Genevieve Metzger</i>	2010	Clonality and genetic diversity of <i>Polygonella myriophylla</i> .	Biology
<i>Kathryn Windes</i>	2010	Anuran responses to rangeland and management in an agricultural environment	Biology
<i>James Angelo</i>	2010	Characterizing the vertical structure and structural diversity of scrub vegetation	Biology
<i>Kathryn Simmons</i>	2009	Habitat use by the southeastern beach mouse at Cape Canaveral, Florida	Biology
<i>C. Knickerbocker</i>	2009	The effects of development intensity on the structure of Cypress Ecosystems	Biology
<i>Carlos R. Anderson</i>	2008	Individual identification of Polar Bears by whisker spot patterns.	Biology
<i>Jacob F. Degner</i>	2008	Genetic and phenotypic evolution in the Ornate Chorus frog ( <i>Pseudacris ornate</i> ).	Biology
<i>Andrea L. Barber</i>	2007	Restoration of Intertidal Oyster reefs affected by intense recreational boating activity.	Biology
<i>Alaina Bernard</i>	2007	Effects of network structure on metapopulation dynamics.	Biology
<i>Michelle Lewis</i>	2007	Population biology of <i>Clitoria fragrans</i> .	Biology
<i>Melinda J. Donnelly</i>	2006	Is the exotic Brazilian pepper <i>Schinus terebinthifolius</i> a threat to mangrove?	Biology
<i>Christian Glardon</i>	2006	Estimation of the current distribution of the genus <i>Caulerpa</i> around Florida.	Biology
<i>Jessica Larson</i>	2006	Spatial demographic model for <i>Hypericum cumulicola</i> .	Mathematics
<i>Nathalie Greenwald</i>	2005	A theoretical approach to assessing energy balance in Gray Whales.	Biology
<i>Victoria Albarracín</i>	2005	Microbial succession in Florida scrub with different time-since-Fire	Biology

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**LIST OF GRADUATED THESES COMPLETED AT *UNIVERSIDAD REY JUAN CARLOS, SPAIN***

Name	Year	Title	Department
<b><i>As Chair of the Committee (I)</i></b>			
<i>Diego Paul Vélez-Mora (PhD)</i>	2023	Biotic and abiotic determinants of the sex ratio in a monoecious shrub in a dry ecosystem. Tutor: José María Iriondo Alegria	Conservación de Recursos Naturales, Universidad Rey Juan Carlos, Madrid, Spain

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**LIST OF GRADUATE THESES COMPLETED AT *EL COLEGIO DE LA FRONTERA SUR, MEXICO***

Name	Year	Title
<b><i>As Chair</i></b>		
	1998	Population dynamics of <i>Ceratozamia matudai</i> Lundell

**As committee member**

<i>Martínez Camilo Rubén (MS)</i>	2010	Efecto del aprovechamiento foliar en <i>Chamaedora quezalteca</i> (Palmae) en el Triunfo, Chiapas, México
<i>Méndez-Dewar, Guadalupe (MS)</i>	2001	Spatial contrasts in gaps of disturbed forests in the Highlands of Chiapas
<i>López-González, Gabriela (MS)</i>	2000	Photosynthetic characterization of four mid and late successional understory tree species in the central highlands of Chiapas, México
<i>Santiago Lastra, José Antonio (MS)</i>	1998	Desempeño del policultivo en un gradiente de humedad de suelo
<i>Galindo Jaimes, Luis (MS)</i>	1998	Estructura y composición de especies arbóreas bajo un gradiente de pinarización en Los Altos de Chiapas

**VISITING RESEARCHERS IN MY LAB AT UCF**

<b>Name</b>	<b>year</b>	<b>Institution</b>
<i>Lorena Ruiz Montoya</i>	2023	El Colegio de La Frontera Sur, San Critóbal de las Casas, Chiapas, Mexico, <i>Visiting Researcher</i>
<i>Diego P. Vélez-Mora</i>	2019	<i>Universidad Técnica Particular de Loja, Ecuador, Visiting Researcher</i>
<i>Hong Liu</i>	2018	<i>Florida International University, Visiting Researcher</i>
<i>Carlos Iván Espinosa</i>	2017	<i>Universidad Técnica Particular de Loja, Ecuador, Visiting Researcher</i>
<i>José María Iriondo Alegría</i>	2017	<i>Universidad Rey Juan Carlos, Móstoles, Madrid, Spain, Visiting Researcher</i>
<i>Aminael Sánchez</i>	2015	<i>Universidad Técnica Particular de Loja, Ecuador, Visiting Researcher</i>
<i>Carlos Iván Espinosa</i>	2015	<i>Universidad Técnica Particular de Loja, Ecuador, Visiting Researcher</i>
<i>Ana Cervigón Morales y José Miguel Olano</i>	2015	<i>Universidad de Valladolid, Soria, Castilla y León, Spain Visiting researchers</i>
<i>Olivia Tabares</i>	2015	<i>Universidad Autónoma de México, México Visiting graduate student</i>
<i>Maria Paniw</i>	2015	<i>Universidad de Cadiz, Spain, Visiting graduate student</i>
<i>Ana Cervigón Morales</i>	2014	<i>Universidad de Valladolid, Soria, Castilla y León, Spain, Visiting graduate student</i>
<i>Merari Esther Ferrer Cervantes</i>	2012-2013	<i>Centro de Investigación Científica de Yucatán, A.C, México, Postdoctoral fellow.</i>
<i>Mónica de La Cruz Vargas Mendoza</i>	2012	<i>Colegio de Postgraduados, Campus Veracruz, Mexico, Visiting researcher</i>
<i>Xavier Picó</i>	2008	<i>Estación Biológica de Doñana, Spain, Visiting researcher</i>
<i>Merari Esther Ferrer Cervantes</i>	2008	<i>Centro de Investigación Científica de Yucatán, A.C, México, Visiting graduate student</i>
<i>Xavier Picó</i>	2007	<i>Estación Biológica de Doñana, Spain, Visiting researcher</i>

**EXTERNAL EXAMINER AT OTHER INSTITUTIONS**

<b>Name</b>	<b>Year</b>	<b>Title</b>	<b>Department, Institution</b>
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David A. Brindis-Badillo	2018 MS	<i>Análisis de viabilidad poblacional de árboles en paisajes tropicales modificados</i>	Posgrado en Ciencias Biológicas. Universidad Nacional Autónoma de México, <b>México</b>
Jason Richardson	2018 PhD	The effects of Gopher Tortoise ( <i>Gopherus Polyphemus</i> ) herbivory on plant community composition and seed germination, and the effect of gut passage on the germinability of seeds.	Integrative Biology. University of South Florida, <b>USA</b>
Katherine M. Giljohann	2016 PhD	Optimal fire management for biodiversity conservation	School of Botany, The University of Melbourne, <b>Australia</b>
Paula Andrea Espinal García	2016 MS	Acercamiento al estado demográfico de la tortuga de río <i>Podocnemis lewyana</i> en la cuenca media del Río Magdalena, Colombia	Maestría en Biología, Facultad de Ciencias Exactas y Naturales. Universidad de Antioquía, <b>Colombia</b>
Agustina Lespiaucq	2016 PhD	The Ecological Role of the within-crown light environment in isolated evergreen trees	Programa de Doctorado, Universidad de Alcalá <b>Spain</b>
Jones, Christopher S	2013 PhD	Riparian vegetation in an agricultural landscape: Assessment and analysis of condition and change	School of Botany, The University of Melbourne, <b>Australia</b>
Sebastián Peña Álzate	2013 MS	Aproximación a los conceptos de resiliencia y estabilidad de ecosistemas utilizando un modelo espacio-temporal de dinámica de sistemas y un sistema basado en agentes	Facultad de Ciencias Exactas y Naturales, Universidad de Antioquía, <b>Colombia</b>

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## UNDERGRADUATE RESEARCH

Lacoursière Alexandria. 2023-2024. Using tensor matrices to analyze spatial and temporal demographic change in *Hypericum cumulicola*. Biology Department, University of Central Florida.

Castro Morales, Luz M. 2010-2012. Germination and early survival of Carolina Willow (*Salix caroliniana*). Biology Department, University of Central Florida.

McArdle Holly. 2007-2008. Pollination Biology of *Polygonella myriophylla*

Beg Maliha. 2008-2009. Seed germination and seedling survival of *Eryngium cuneifolium*, *Hypericum cumulicola*, *Liatris ohlingerae*, *Paronychia chartacea*, and *Polygonella basiramia*

Pfingsten, Ian. 2007. Simulating demographic effects of environmental variation for a pyrogenic Florida Scrub plant”. Biology Department, University of Central Florida.

Kotlyar, Biana. 2007. Reproductive schedule of *Polygonella myriophylla* in roads and Florida scrub. Biology Department, University of Central Florida. Her work was supported through a RAMP-UCF

Holten, Katrina. 2004. Plant growth and demography of the rare, epiphytic fern *Ophioglossum palmatum* (*Cheroglossa palmata*) at Tosohatchee State Reserve. Biology Department, University of Central Florida. She was jointly supervised by E.M. Norman (Stetson Univ.). Ms

Holten work was supported through a RAMP-UCF. She presented a talk in the Florida Academy of Sciences 68 Annual Meeting, in Tampa, FL.

Ruíz Ruvalcaba, Sandra Eunice. 1999. Variación demográfica de *Oreopanax xalapensis* en comunidades sucesionales de Los Altos de Chiapas, México. Escuela Nacional de Estudios Profesionales Iztacala, Universidad Nacional Autónoma de México. México D.F. México.

Mayfield, Margaret. 1995. Pollination in *Chapmania floridana*: effect of individual density. Internship. Archbold Biological Station. Lake Placid, Florida, USA.

Carrillo Arreola, Fernando 1992. Lluvia de semillas y establecimiento de plántulas en comunidades secundarias de la Selva Lacandona, Chiapas, México. Facultad de Ciencias, Universidad Nacional Autónoma de México. México D.F. México.

Domínguez Vázquez, Gabriela 1992. El banco de semillas en la regeneración de comunidades sucesionales de la Selva Lacandona, Chiapas. Escuela de Biología, Instituto de Ciencias y Artes de Chiapas. Tuxtla Gutiérrez, Chiapas, México.

Pérez Rodríguez, Francisco Othón 1988. Depredación y dispersión de frutos y semillas de *Opuntia* spp. por ungulados domésticos: efecto de la composición de la dieta. Facultad de Ciencias, Universidad Nacional Autónoma de México. México D.F., México.

## SERVICE

### REVIEWER FOR:

Agrociencia (Colegio de Postgraduados, Mexico), Basic and Applied Ecology, Biological Invasions, Conservation Biology, The American Midland Naturalist, The American Naturalist, Journal of Vegetation Science, Journal of Applied Ecology, Journal of Ecology, Ecology, Ecological Monographs, Ecology Letters, Ecosphere, Journal of Theoretical Biology, Australian Journal of Botany, American Journal of Botany, Evolutionary Ecology, Plant Ecology, Population Ecology, Plos-ONE, Proceedings of the Royal Society B, Oikos, Oecologia, Restoration Ecology. Proceedings of the Academy of Sciences.

Handling Editor: **Bioscience** (2016-present)

Reviewer by request of the academic dossier of *Dr. Khawaja Shafique Ahmad*, Assistant Professor, who was considered for Early Promotion to Tenured Associate Professor at the **Department of Botany, University of Poonch Rawalakot, Kashmir, Pakistan**.

### COMMITTEES AT UCF:

**Tenure and Promotion Committee**, College of Sciences, **University of Central Florida**, Orlando Florida, USA. 2016-2017

**Graduate Committee**. Department of Biology, **University of Central Florida**, Orlando Florida, USA. (2006 - 2016). **Coordinator of the Graduate Program**: 2013- 2015.

**Arboretum Committee**. Dept. Biology, **University of Central Florida**, Orlando Florida, USA. (2004-2007)

**Coordinator of the Biology Field Building, University of Central Florida**, Orlando Florida, USA (2010-2011)

**Search Committee (Instructor-Herbarium curator)**. Department of Biology, **University of Central Florida**, Orlando Florida, USA

**Search Committee (Ecoinformatics)**. Department of Biology, **University of Central Florida**, Orlando Florida, USA

**Search Committee (Plant Physiologist)**. Department of Biology, **University of Central Florida**, Orlando Florida, USA

**Search Committee (Plant Biologist)**. Department of Biology, **University of Central Florida**, Orlando Florida, USA

**Search Committee (GIS Ecologist)**. Department of Biology, **University of Central Florida**, Orlando Florida, USA

**Search Committee (Fish Biologist)**. Department of Biology, **University of Central Florida**, Orlando Florida, USA

**Search Committee (Arboretum Director)**. Department of Biology, **University of Central Florida**, Orlando Florida, USA

**College of Sciences Sabbatical Leave Committee**. **University of Central Florida**, Orlando Florida, USA. (2008, 2009, 2010, 2013, 2014, 2015); *Chair* 2009, 2010, 2015

**OTHER COMMITTEES:**

Founder member of the **Archbold Biological Station Diversity, Equity, and Inclusion Committee**. 2021-2022

Member of the 2022 **National Science Foundation** Population and Community Ecology Evaluation Panel hold **virtually nationwide**.

Member of the 2010 **National Science Foundation** Population and Community Ecology Evaluation Panel hold at **Washington, DC**.

Reviewer of proposals for the Division of Environmental Biology. **National Science Foundation**.

Participation at the **Program BioVeL workshop “Modeling population response to environmental change”** University of Amsterdam 2012.

Participation at the **The National Center for Ecological Analysis and Synthesis**: “When are matrix models useful for management? An empirical test across plant populations”; with Elizabeth Crone, Eric Menges and Martha Ellis. Santa Barbara, California, 2009-2010.

Member of the editorial board of **Ecosistemas**, an electronic journal of the Asociación Española de Ecología Terrestre, Spain (<http://www.aeet.org/ecosistemas/portada.htm>). (2002- present).



**Graduate Program.** El Colegio de la Frontera Sur, San Cristóbal de Las Casas, Chiapas, México. (1997-1999). **Chair** 1998-1999.

Coordinator Fall 1995 and Spring 1996 Archbold Biological Station academic seminar series.

Curator, **Herbarium**, Centro de Investigaciones Ecológicas del Sureste, San Cristóbal de Las Casas, Chiapas, México. 1991-1992.

**REVIEWER FOR THE SOUTH FLORIDA ECOLOGICAL SERVICES OFFICE, FISH AND WILDLIFE SERVICE, UNITED STATES, DEPARTMENT OF THE INTERIOR**

Comments for the 5-year status review of the endangered Avon Park harebells (*Crotalaria avonensis*).

Comments for the 5-year status review of the endangered Highlands Scrub Hypericum (*Hypericum cumulicola*).

Comments for the 5-year status review of the threatened Papery whitlow-wort (*Paronychia chartacea*).

Comments for the 5-year status review of the endangered snakeroot (*Eryngium cuneifolium*).

Comments for the 5-year status review of the scrub blazingstar (*Liatris ohlingerae*).

\* \* \* \* \* *Pedro Francisco Quintana-Ascencio...* 2024