

ROBYN J. BURNHAM

Associate Professor of Ecology & Evolutionary Biology
1023 Ruthven Museums, University of Michigan
Ann Arbor, MI 48109-1079 email: rburnham@umich.edu
(734) 647-2585 FAX: (734) 936-1380
cv lattes (Brazil) <http://lattes.cnpq.br/9370595990858469>
website: <https://sites.lsa.umich.edu/rburnham/>

PRESENT POSITION Associate Professor of Ecology & Evolutionary Biology
Director, Edwin S. George Reserve

ADJUNCT POSITIONS

Research Associate: **Smithsonian Institution**, Washington DC, **Missouri Botanical Garden**, St. Louis, MO, **The Field Museum**, Chicago, IL
Associate Curator of Paleontology: University of Michigan
Associate Professor: Earth and Environmental Sciences, University of Michigan
Associate Curator: Herbarium, University of Michigan
Faculty Associate: Program In The Environment, Matthaei Botanical Garden, Nichols Arboretum

RESEARCH INTERESTS

Population biology, biogeography, and systematics of dominant neotropical lianas (MOLA)
Conservation status of neotropical lianas; corridors and preserves as biodiversity banks
Angiosperm migration, radiation, and phylogeny in northern South America
Biodiversity, ecosystem structure, and biotic change during Andean uplift
Censusing Lianas in Mesic Biomes of the Midwest RegionS (CLIMBERS)
Vine Dispersal Across Space (VIDAS)

EDUCATION

Ph.D., Botany, University of Washington 1987
M.S., Botany, University of Washington 1983
B.S., Botany, University of California, Berkeley 1980

PROFESSIONAL POSITIONS HELD

1997 - present Associate Professor, Ecology & Evolutionary Biology & Associate Curator of Paleobotany, U Michigan
1991 - 1997 Assistant Professor, Ecology & Evolutionary Biology & Assistant Curator of Paleobotany, U Michigan
1990 - 1991 Curator: Botany and Paleobotany, New Mexico Museum of Natural History
1988 -1989 Smithsonian Postdoctoral Fellow
1987 Lecturer, Department of Botany, University of Washington

EDITORSHIPS & SERVICE:

Editor: Paleobiology, Term 2004-2007
Grant Funding Panel: Sustainable Agriculture and Natural Resources Management (US-AID)
Moore Medal Committee: Society for Economic Paleontologists & Mineralogists 2000-2003
International Committee: Third Ecuadorian Botanical Congress October 2000
Scientific Board: Tiputini Biodiversity Station, Yasuní National Park, Ecuador 1997- present
Reviewer: American Journal of Botany, Annals of Botany, Biotropica, Brittonia, Bulletin Geological Society of America, Canadian Journal of Botany, Diversity and Distributions, Ecology, Ecology Letters, Forest Ecology & Management, Geology, Global and Planetary Change, International Journal of Plant Science, Journal of Biogeography, Journal of South American Earth Sciences, Journal of Tropical Ecology, Molecular Phylogenetics and Evolution, Northeastern Naturalist, New Phytologist, Palaios, PLOS Biology, Paleobiology, Proceedings of the National

Academy of Sciences USA, Review of Palaeobotany & Palynology, Plant Ecology, Plant Ecology & Diversity, PLOS Biology, Puente Biologico (Biological Bridge, RPB), Science, Torrey Botanical Society

SOCIETY MEMBERSHIPS:

Association for Tropical Biology	International Organization of Paleobotany
Botanical Society of America	ICAN - Canopy Research Association
Latin American Botanical Association	Paleontological Society
Intern. Association of Wood Anatomists	Herbarium Curators Association

GRANTS, FELLOWSHIPS, and AWARDS:

2014 Ecological Society of America Cooper Award (papers in geobotany/physiography)
 2012 NASA, Graduate Fellowship to David Marvin (\$30,000): he returned it, unused.
 2011 LSA Associate Professor Support Fund, UM, (\$78,000)
 2010 Huyck Preserve, New York: Award for Forest Research
 2010 National Geographic Society Liana Censuses near Manaus, Brazil (\$20,000)
 2009 CTFS Award for Liana Censuses of the Manaus, Brazil CTFS Plot (\$15,000)
 2009 Grant for Research: Huron Mountain Foundation (\$900)
 2008 Sweetland Writing Fellowship – Senior Fellow, University of Michigan
 2008 Grant for Research: Huron Mountain Foundation (\$1700)
 2008 Public Goods Grant (\$2500)
 2006 CTFS Award for Research on Lianas in Two Western Amazonian Forests (\$4000)
 2005 Amazonian Conservation Association Grant for Exploratory Field Research (\$7000)
 2005 UM LSA IT Grant to Support Plant Biodiversity and Electronic Field Guides (\$84,550)
 2005 NCEAS Award for Organization of the Liana Workshop Santa Barbara, CA (\$50,000)
 2004 Gil Whittaker Grant to Support the EEB Biodiversity Research Initiative (\$10,000)
 2003 NSF ADVANCE Program - Elizabeth Caroline Crosby Award (\$20,000)
 2003 WISC (AAAS) – Women’s International Science Collaboration Travel Grant \$4,000
 2001 Aldo Leopold Leadership Fellowship (Ecological Society of America)
 1999 Fulbright Commission Follow-up Fellowship (1 month) ~\$5,000
 1998 Fulbright Commission Senior Scholarship in Ecuador (3 months) ~\$25,000
 1998 Mellon Foundation Visitor to ECP Program, Field Museum Chicago (3 mos) ~\$20,000
 1997 National Geographic Society: Miocene Fossils in Bolivia and Ecuador (\$21,000)
 1995 Career Development Award - University of Michigan (\$5000)
 1995 American Philosophical Society Michaux Award (\$4500)
 1994 National Science Foundation Grant - Paleontology & Stratigraphy (\$201,000)
 1994 University of Michigan Office of Vice President for Research (\$5930)
 1993 American Philosophical Society Michaux Award (\$2000)
 1993 Geology Department Turner Award (U. of Michigan) (\$2000)
 1992 National Geographic Society: Ecuador (Co-Investigator) (\$20,908)
 1992 University of Michigan Rackham Graduate School Grant (\$10,000)
 1991 American Philosophical Society Michaux Award (\$1400)
 1991 Smithsonian BIOLAT Program Fieldwork award: Peru (\$3500) and Peru (\$1763)
 1991 Smithsonian CCRE Program Fieldwork award: Belize (\$1000)
 1990 Smithsonian BIOLAT Program Fieldwork award: Peru (\$1900)
 1989 Smithsonian BIOLAT Program Fieldwork award: Peru / Bolivia (\$3600)
 1989 Smithsonian CCRE Program Fieldwork award: (\$800)
 1989 Smithsonian BIOLAT Program Fieldwork: Co-Investigator (\$5,864)
 1989 Smithsonian Scholarly Studies Grant: Co-Investigator (\$31,507)
 1988 Smithsonian Research Opportunities Grant (\$1813)
 1988 Smithsonian Postdoctoral Fellowship (\$18,000)
 1986 Achievement Rewards for College Scientists Foundation Dissertation Fellowship
 1986 Geological Society of America, Outstanding Mention Grant (\$1200)

1983 Sigma Xi Graduate Research Grant (\$350)

1983 Geological Society of America, Graduate Grant (\$800)

1982 National Science Foundation 3-year Graduate Fellowship (\$10,000/each year)

PUBLICATIONS

- 1) Souza-Brito, A.C., A. Ferraro, V.A. Assunção, **R.J. Burnham**, & A.L.B. Sartori 2017. Liana species composition differs in spite of trait similarities in two adjacent forest types in Central Brazil. *International Journal of Tropical Biology* (Rev. Biol. Trop.) 65(3):1215-1215. ISSN-0034-7744
 - 2) Addo-Fordjour, P., Z.B. Rahmad, & **R.J. Burnham** (2016, online). Intercontinental comparison of liana community assemblages with special reference to tropical forests in Ghana and Malaysia. *Journal of Plant Ecology*. <https://doi.org/10.1093/jpe/rtw082>
 - 3) Sfair, J.C., A.L.C. Rochelle, A. A. Rezende, J. van Melis, **R.J. Burnham**, V. de L. Weiser & F.R. Martins 2016. Liana avoidance in trees: Trees combine traits to be more effective. *Tropical Ecology* 57(3): 559-566. ISSN: 0564-3295
 - 4) Vilela dos Santos, M.C., L.F. Barbosa, R. de S. Carpanedo, **R.J. Burnham**, & D. de J. Rodrigues 2015. Caracterização florística de lianas do Parque Estadual Cristalino. In D.J. Rodrigues et al., eds, *Biodiversidade do Parque Estadual Cristalino*. Sinop (MT): Áttema Editorial.
 - 5) **Burnham, R.J.** & C.V. Santanna 2015. Distribution, diversity, and traits of native, exotic, and invasive climbing plants in Michigan. *Brittonia* 67(4):350-370, doi: 10.1007/s12228-015-9385-1
 - 6) Fauset, S. M.O. Johnson, M. Gloor, T.R. Baker....and 98 others (with **Robyn J. Burnham**). 2015. Hyperdominance in Amazonian forest carbon cycling. *Nature Communications*. 6:6857 (1-9) doi: 10.1038/ncomms7857
 - 7) Marvin, D.C., K. Winter, R.J. Burnham, & S.A. Schnitzer 2015. No evidence that elevated CO₂ gives tropical lianas an advantage over tropical trees. *Global Change Biology* 21:2055–2069 doi: 10.1111/gcb.12820.
 - 8) **Burnham R.J.** and H.V. Romero-Saltos 2015. Diversity and distribution of lianas in Yasuní, Ecuador, pp. 50-64 in S.A. Schnitzer, F. Bongers, R.J. Burnham, and F.E. Putz, (eds.) *The Ecology of Lianas*, Wiley-Blackwell, Oxford, UK.
 - 9) **Burnham, R.J.** 2015. Climbing plants in the fossil record: Paleozoic to Present. pp. 205-220 in S.A. Schnitzer, F. Bongers, R.J. Burnham, & F.E. Putz (eds.) *The Ecology of Lianas*, Wiley-Blackwell, Oxford, UK.
 - 10) Nogueira, A., F.R. Costa, M.C. Vilela-Santos, C.V. Castilho, A. Andrade, J.L. Camargo, W.F. Laurance, & **R.J. Burnham** 2015. Liana assemblage structure in four sites across the Brazilian Amazon. pp. 65-75 in S.A. Schnitzer, F. Bongers, R.J. Burnham, & F.E. Putz (eds.) *The Ecology of Lianas*, Wiley-Blackwell, Oxford, UK.
 - 11) DeWalt, S.J., S.A. Schnitzer, L.F. Alves, F. Bongers, **R.J. Burnham**, Z. Cai, W.P. Carson, J. Chave, G.B. Chuyong, F.R.C. Costa, C.E.N. Ewango, R.V. Gallagher, J.J. Gerwing, E.G. Amezcua, T. Hart, G. Ibarra-Manríquez, K. Ickes, D. Kenfack, S.G. Letcher, M.J. Macía, J.-R. Makana, A. Malizia, M. Martínez-Ramos, J. Mascaro, C. Muthumperumal, S. Muthuramkumar, A. Nogueira, M.P.E. Parren, N. Parthasarathy, D.R. Pérez-Salicrup, F.E. Putz, H. Romero-Saltos, M.S. Reddy, M. N. Sainge, D. Thomas, & J. van Melis 2015. Worldwide liana abundance and diversity – a global meta-analysis of small census plots. pp. 131-146 in S.A. Schnitzer, F. Bongers, R.J. Burnham, & F.E. Putz (eds.) *The Ecology of Lianas*, Wiley-Blackwell, Oxford, UK.
 - 12) Thomas, D., **R.J. Burnham**, G. Chuyong, D. Kenfack, & M.N. Sainge 2015. Liana abundance and diversity in Cameroon's Korup National Park. pp. 13-22 in S.A. Schnitzer, F. Bongers, R.J. Burnham, & F.E. Putz (eds.) *The Ecology of Lianas*, Wiley-Blackwell, Oxford, UK.
 - 13) Villagra, B.L.P., E.P.C. Gomes, **R.J. Burnham**, & S.R. Neto 2013. Diversity and abundance of climbers from the Atlantic Forest, southeastern Brazil. *Biodiversity and Conservation* 22: 2505-2517.
-

- 14) Smith, S.Y., S.A. Little, R.L. Cooper, **R.J. Burnham**, & R.A. Stockey. 2013. A ranunculalean liana stem from the Cretaceous of British Columbia, Canada: *Atli morinii* gen. et sp. nov. *International Journal of Plant Sciences* 174: 818-831.
 - 15) Vilela-Santos, M.C., L.F. Barbosa, N.A. Coutinho, M.H.O. Pinheiro, D.J. Rodrigues, L. Cavalheiro, R. Arruda, E.J. Almeida, & **R.J. Burnham** 2012. Five new records of *Gurania* Cogn (Cucurbitaceae A. Juss) for Southern Amazonia, Mato Grosso, Brazil. *Check List* (São Paulo. Online), 8(2): 239-241.
 - 16) Wing, S.L., C.A.E. Strömberg, L.J. Hickey, F. Tiver, B. Willis, R.J. Burnham, & A.K. Behrensmeyer 2012. Floral and environmental gradients on a Late Cretaceous landscape. *Ecological Monographs* 82: 23-47.
 - 17) **Burnham, R.J.** & C. Revilla-Minaya 2011. Phylogenetic influence on twining chirality in lianas from Amazonian Peru. *Annals of the Missouri Botanical Garden* 98(2): 196-205.
 - 18) Garrido-Pérez, E. I. & **R. J. Burnham** 2011. The evolution of host specificity in liana-tree interactions. *Revista Puente Biológico* 3:145-157.
 - 19) **Burnham, R.J.** & G.S. Tonkovich 2011. Climate, leaves, and the legacy of two giants. *New Phytologist* 190(3): 514-516.
 - 20) DeWalt, S.J., S.A. Schnitzer, J. Chave, F. Bongers, **R.J. Burnham**, Z. Cai, G. Chuyong, D.B. Clark, C.E. N. Ewango, J.J. Gerwing, E. Gortaire, T. Hart, G. Ibarra-Manríquez, K. Ickes, D. Kenfack, M.J. Macía, J. Makana, M. Martínez-Ramos, J. Mascaro, S. Moses, H.C. Muller-Landau, M.P.E. Parren, N. Parthasarathy, D.R. Pérez-Salicrup, F.E. Putz, H. Romero-Saltos, & D. Thomas 2010. Annual rainfall and seasonality predict pan-tropical patterns of liana density and basal area. *Biotropica* 42(3): 309-317.
 - 21) **Burnham R.J.** 2009. An overview of the fossil record of climbers: bejucos, sogas, trepadoras, lianas, cipós, and vines. *Revista Brasileira de Paleontologia* 12(2): 149-160.
 - 22) Bennington, J.B., W. DiMichele, C. Badgley, R. Bambach, P. Barrett, K. Behrensmeyer, R. Bobe, **R.J. Burnham**, T. Daeschler, J. vanDam, J. Eronen, D. Erwin, S. Finnegan, S. Holland, G. Hunt, D. Jablonski, S. Jackson, B. Jacobs, S. Kidwell, P. Koch, M. Kowalewski, C. Labandeira, C. Looy, K. Lyons, P. Novack-Gottshall, R. Potts, P. Roopnarine, C. Strömberg, H. Sues, P. Wagner, P. Wilf, & S.Wing, 2009. Critical issues of scale in paleoecology. *Palaos* 24(1-2): 1-4.
 - 23) Fine, P.A.V., R. Ree, & **R.J. Burnham** 2008. The disparity in tree species richness among tropical, temperate and boreal biomes: The geographic area and age hypothesis. Pp. 31-45 in *Tropical Forest Community Ecology*, W.P. Carson & S.A. Schnitzer (eds.), Blackwell Scientific.
 - 24) **Burnham, R.J.** 2008 Hide and Go Seek: What does presence mean in the fossil record? *Annals of the Missouri Botanical Garden* 95(1): 51-71. doi: 10.3417/2007002
 - 25) Gerwing, J.J., S.A. Schnitzer, **R.J. Burnham**, F. Bongers, J. Chave, S.J. DeWalt, C. E.N. Ewango, R.B. Foster, David Kenfack, M. Martinez-Ramos, M. Parren, N. Parthasarathy, D.R. Pérez-Salicrup, F. E. Putz, & D.W. Thomas. 2006 A standard protocol for liana censuses. *Biotropica* 38(2): 256-261. doi: 10.1111/j.1744-7429.2006.00134.x
 - 26) **Burnham, R.J.**, K.R. Johnson, & B. Ellis 2005. Modern tropical forest taphonomy: Does high biodiversity affect paleoclimatic interpretations? *Palaos* 20:439-451.
 - 27) **Burnham, R.J.** & N.L. Carranco 2004. Miocene winged fruits of *Loxopterygium* (Anacardiaceae) from the Ecuadorian Andes. *American Journal of Botany* 91(11): 1767-1773.
 - 28) **Burnham, R.J.** & K.R. Johnson 2004. South American paleobotany and the origins of neotropical rainforests. *Philosophical Transactions of the Royal Society of London*, series B. 359:1595-1610. 10.1098/rstb.2004.1531
 - 29) **Burnham, R.J.** 2004. Alpha and beta diversity of lianas in Yasuní National Park, Ecuador. *Forest Ecology and Management* 190:43-55. 10.1016/j.foreco.2003.10.005
 - 30) **Burnham, R.J.** 2002. Dominance, diversity and distribution of lianas in Yasuní, Ecuador: who is on top? *Journal of Tropical Ecology* 18:845-864. 10.1017/S0266467402002559
 - 31) **Burnham, R.J.** 2002. Climbers of Yasuní National Park, Ecuador and their importance in tropical forests. Pp. 181-210 in *Memorias del Tercer Congreso Botánico del Ecuador*. A. Freire-Fiero y D. Neill, eds.
 - 32) **Burnham, R.J.** 2001. Is Conservation Biology a Paleontological Pursuit? *Palaos* 16(5): 423-424.
-

- 33) **Burnham, R.J.**, N.C.A. Pitman, K.R. Johnson & P. Wilf. 2001. Habitat-related error in estimating temperatures from leaf margins in a humid tropical forest. *American Journal of Botany* 88(6): 1096-1102.
 - 34) Sanchez-Villagra, M.R., **R.J. Burnham**, D. Campbell, R.M. Feldmann, E.S. Gaffney, R.F. Kay, R. Lozsan, R. Purdy, & J.G.M. Thewissen 2000. The Fauna and flora from a new near-shore marine assemblage of early Neogene age from northwestern Venezuela. *Journal of Paleontology* 74(5): 957-968.
 - 35) **Burnham, R.J.** 2000. Plants (Adaptive Strategies). In R. Singer, ed. *Encyclopedia of Paleontology*. Fitroy Dearborn Publishers.
 - 36) **Burnham, R.J.** & A. Graham 1999. The History of Neotropical vegetation: new developments and status. *Annals of the Missouri Botanical Garden* 86:546-589.
 - 37) Mirle, C. & **R.J. Burnham** 1999. Identification of asymmetrically winged samaras from the Western Hemisphere. *Brittonia* 51:1-14.
 - 38) **Burnham, R.J.** 1997. Stand characteristics and leaf litter species composition of a dry forest hectare in Santa Rosa National Park, Costa Rica. *Biotropica* 29(4): 384-395.
 - 39) **Burnham, R.J.** 1997. Diversity of Tropical Forest Leaf Litter at Pakitsa, Peru. Pp127-140, in D.E. Wilson & A. Sandoval, eds. *Manu: La Biodiversidad del Sureste del Perú*. Smithsonian Institution Press: Washington.
 - 40) **Burnham, R.J.** 1996. Republic leaf deposits and Eocene ecology. *Washington Geology* 24(2):19.
 - 41) **Burnham, R.J.** 1995. A new species of winged fruit from the Miocene of Ecuador: *Tipuana ecuatoriana* (Leguminosae). *American Journal of Botany* 82(12):1599-1607.
 - 42) **Burnham, R.J.** 1995. Plant invasions: one measure of ecosystem change. *Geotimes* 40(8): 16-18.
 - 43) **Burnham, R.J.** 1994. Plant deposition in modern volcanic environments. *Transactions of the Royal Society of Edinburgh* 84:275-281.
 - 44) **Burnham, R.J.** 1994. Patterns in tropical leaf litter and implications for Angiosperm paleobotany. *Review of Palaeobotany and Palynology* 81:99-113.
 - 45) **Burnham, R.J.** 1994. Paleoecological and floristic heterogeneity in the plant fossil record: an analysis based on the Eocene of Washington. *United States Geological Survey Bulletin* 2085B: 1-36.
 - 46) **Burnham, R.J.** 1993. Reconstructing richness in the plant fossil record. *Palaios* 8(4):376-384.
 - 47) **Burnham, R.J.** 1993. Time resolution in terrestrial macrofloras. in S. Kidwell and A.K. Behrensmeyer, eds. *Taphonomic Approaches to Time Resolution in Fossil Assemblages*. Paleontological Society Short Courses in Paleontology No. 6.
 - 48) **Burnham, R.J.**, S.L. Wing & G.G. Parker 1992. The reflection of deciduous forest communities in leaf litter: implications for autochthonous litter assemblages from the fossil record. *Paleobiology* 18(1): 34-53.
 - 49) **Burnham, R.J.** 1990. Some Late Eocene depositional environments of the coal-bearing Puget Group of western Washington state, U.S.A. *International Journal of Coal Geology* 15: 27-51.
 - 50) **Burnham, R.J.** 1990. Paleobotanical implications of drifted seeds and fruits from modern mangrove litter, Twin Cays, Belize. *Palaios* 5:364-370.
 - 51) **Burnham, R.J.** 1989. Relationships between standing vegetation and leaf litter in a paratropical forest: Implications for paleobotany. *Review Paleobotany and Palynology* 58:5-32.
 - 52) **Burnham, R.J.** 1988. A large-volume lightweight coring device for use in shallow water and soft sediments. *Journal of Paleontology* 62(3): 477-478.
 - 53) **Burnham, R.J.** 1988. Paleoecological approaches to analyzing stratigraphic sequences. *Paleontological Society Special Publication* No. 3. Pp 105-125.
 - 54) **Burnham, R.J.** & R.A. Spicer. 1986. Forest litter preserved by volcanic activity at El Chichon, Mexico: A potentially accurate record of pre-eruption vegetation. *Palaios* 1(2): 158-161.
 - 55) **Burnham, R.J.** 1986. Morphological Systematics and the Ulmoideae. Pp 105-121 in R.A. Spicer and B.A. Thomas, eds. Systematics and Taxonomy in Paleobotany. *Systematics Association Special Volume 31*. Oxford University Press: Oxford.
-

- 56) **Burnham, R.J.** 1986. Foliar Morphological Analysis of the Ulmoideae (Ulmaceae) from the early Tertiary of North America. *Palaeontographica Abt B.* 201: 135-167.
- 57) Spicer, R.A., **Burnham, R.J.** P.R. Grant, and H. Glicken. 1985. Pityrogramma calamelanos: the primary colonizer of Volcán Chichón, Chiapas, Mexico. *American Fern Journal* 75(1): 1-7.
- 58) **Burnham, R.J.** 1982. The Eocene in Washington: Almost Another World. University of Washington *Arboretum Bulletin* 45(3): 32-36.
-

BOOKS

Schnitzer, S.A., F. Bongers, **R.J. Burnham**, and F.E. Putz, (eds.) 2015. *The Ecology of Lianas*, Wiley-Blackwell, Oxford, UK.

PAPERS IN PRESS

Burnham, R.J. (2017, in press). The Liana Community at Tiputini: A Lifestyle Alternative. In K. Swing, D. Romo, & D. F. Cisneros-Heredia (eds.) *Tiputini Biodiversity*.

PAPERS ACCEPTED

Polisel, R.T., **R.J. Burnham**, P.V. Eisenlohr, A.L.C. Rochelle, F.R. Martins (subm. 2015) Climbing plants in the Brazilian Atlantic Forest: surveys, species distributions, and knowledge gaps. *Biodiversity and Conservation (Special Issue: Brazilian Atlantic Forest)*.

PAPERS SUBMITTED

- Iverson, AL, Gonthier, DJ, Pak, D, Ennis, KK, **Burnham RJ**, Perfecto, I, Ramos Rodrigues, M, Vandermeer, J. (subm.) A multifunctional approach to resolving a key dilemma in biodiversity conservation and farmer livelihood. In review, *Proceedings of the Royal Society of London: B*
- Iverson, A., **R.J. Burnham**, and J. H. Vandermeer (in review) Is local or landscape-scale heterogeneity more beneficial to arthropod natural enemies? *Landscape Ecology*
- Iverson A, **Burnham R**, Perfecto I, Vandenberg N, Vandermeer J. Lady beetle, *Diomus* sp. (Coleoptera: Coccinellidae), exploits an ant-protected agricultural pest through chemical mimicry. In review, *Ecologia Experimentalis et Applicata*.
- Iverson, A., Jackson, D., **Burnham, R.J**, Perfecto, I. Vandenberg, N. and J. Vandermeer (subm.) Species complementarity in two myrmecophilous lady beetle species in a coffee agroecosystem: Implications for biological control. In review, *BioControl*
- Rauscher, A. K. and **Burnham, R.J.** (in revision). Phylogenetic Comparison of the Patterns of Human Use in the Menispermaceae (Moonseed Family). Submitted to: *Annals of the Missouri Botanical Garden*

BOOK REVIEWS

- Burnham, R. J., 2004. Review of P. Karieva and S. Levin, *The Importance of Species: Perspectives on Expendability and Triage*. Princeton University Press. *Plant Systematics and Evolution*. 248: 243-244.
- Burnham, R. J. 2003. Review of: Chazdon, R.L. & T.C. Whitmore (eds.) 2002. *Foundations of Tropical Biology*, 862p. University of Chicago Press. *Plant Systematics and Evolution*.
- Burnham, R. J. 2003. Review of: D. J. Beerling & F. I. Woodward *Vegetation and the Terrestrial Carbon Cycle: Modelling the First 400 Million Years*. *Quarterly Review of Biology*. 78:238-9.
- Burnham, R.J. 2001 Review of: Morley, R. J. 1999. *Origin and Evolution of Tropical Rainforests*. 362p. John Wiley & Sons. *Plant Systematics and Evolution* 226(1/2):115-117.
- Burnham, R.J. 2000. Review of: Graham, A. 1999. *Late Cretaceous and Cenozoic History of North American Vegetation*. 350p. Oxford University Press. *Quarterly Rev. of Biology* 75(4):477-478.
- Burnham, R.J. 2000. Review of: Morley, R. J. 1999, *Origin and Evolution of Tropical Rainforests*. 362p. John Wiley & Sons. *Palaios* 15(6): 580-581.
- Burnham, R.J. 1993. Review of: J.D. Damuth, W.A. DiMichele, R. Potts, H.-D. Sues & S.L. Wing, Eds. 1992. *Terrestrial Ecosystems Through Time - Evolutionary Paleoecology of Terrestrial Plants and Animals*. University of Chicago Press 568 pp. *Plant Science Bulletin* 39(1):12-14.
-

DiMichele, W.A., Burnham, R.J. and Sues, H.D. 1988. The Origins of Angiosperms and Their Biological Consequences, edited by E.M. Friis, W.G. Chaloner and P.R. Crane (1987): Cambridge University Press. *Palaios* 3(4): 449-452.

FIELD GUIDES AND UNREVIEWED LITERATURE

- Burnham, R.J. (1999) *Guia Practica: Lianas del Parque Nacional Manu*. Patrocinado por Andrew Mellon Foundation; Environmental & Conservation Program, The Field Museum, Chicago.
- Burnham, R.J. and E.J. Lott (1999) *Guia Practica para las Plantas Trepadoras del Bahia de Chamela*. Patrocinado por Andrew Mellon Foundation y Environmental and Conservation Program, The Field Museum, Chicago y National Science Foundation.
- Burnham, R.J. (1998) *Guia Practica para las Lianas y Epifitas de Parque Nacional Yasuní*, (emphasis on Tiputini Biodiversity Station & Estación Científica Yasuní). Patrocinado por Andrew Mellon Foundation y Environmental and Conservation Program, The Field Museum, Chicago.
- Burnham, R.J. (1999) *Guia Fotografica de las lianas comunes del Parque Nacional Yasuní*, Ecuador. Patrocinado por Andrew Mellon Foundation y Environmental and Conservation Program, The Field Museum, Chicago.
- Burnham, R.J. and R.B. Foster (2000) *Guia Fotografica de las lianas comunes del Parque Nacional Manu*, Peru. Patrocinado por Andrew Mellon Foundation y Environmental and Conservation Program, The Field Museum, Chicago.

CONTRIBUTED PAPERS (National and International Meetings)

- Burnham, R.J. 1983. Diversification and stable distribution with respect to temperature in early Tertiary Ulmoideae of western North America. *Amer. Journal of Botany* 70(5):68.
- Burnham, R.J. and R.A. Spicer 1984. Preservation of forest litter in volcanoclastic sediments of El Chichon, Mexico. *International Org. of Paleobotany*, Edmonton.
- Burnham, R.J. 1985. Deposition and preservation of plants in a modern paratropical basin. *American Journal of Botany* 72(6):890.
- Burnham, R.J. 1986. Depositional interpretation of Eocene plant fossil assemblages. *American Journal of Botany* 73(6):695
- Burnham, R.J. 1988. Criteria for recognition of angiospermous mangroves with an example from the Eocene of Washington. *American Journal of Botany* 75(6):104.
- Burnham, R.J. 1989. Paleolandscape reconstruction: the effect of sampling scale on interpretation. *Mid-Continent Paleobotanical Colloquium*.
- Burnham, R.J. and S.L. Wing 1989. Temperate forest litter accurately reflects stand composition and structure. *American Journal of Botany* 76(6):159.
- Burnham, R.J., S.L. Wing and G.G. Parker. 1990. Plant diversity and the fossil record: how reliable are the estimates? *Int. Cong. Systematic & Evol.y Biol.* College Park, Maryland.
- Burnham, R.J. 1991. Ecological reconstructions of fossil floras: are all floras created equal? *American Journal of Botany* 77(6).
- Burnham, R.J. 1992. Patterns in tropical leaf litter and implications for angiosperm paleobotany. *International Org. of Paleobotany*, 4th Conference, Paris, France.
- Wing, S.L., Hickey, L.J. and Burnham, R.J. 1992. Exceptional Maastrichtian flora shows that high diversity does not imply ecological dominance. *GSA Program & Abstracts*, OH.
- Burnham, R.J. 1993. Time Resolution in Terrestrial Macrofloras. *Geological Society of America Annual Meetings*, Boston, MA.
- Burnham, R.J. 1994. A preliminary report of Miocene plant fossils from central and southern Ecuador. *American Journal of Botany* 81(6):89.
- Madden, R.H., R. Burnham, C.C. Swisher III, A.A. Carlini, A.H. Walton 1994. Mammalian Paleontology, paleobotany and geochronology of the Miocene intermountain basins of southern Ecuador. *Society for Vertebrate Paleontology*, Seattle, WA.

- Burnham, R.J. 1994. Investigations of modern leaf litter & their importance in evaluating the taphonomy of Neogene plant deposits of the western U.S. Geol. Soc. Amer., Seattle, WA.
- Burnham, R.J. 1995. Middle and Late Miocene plant fossils from central and southern Ecuador. *American Journal of Botany* 82(6):84.
- Burnham, R.J. 1996. Stand characteristics and leaf litter species composition of a dry forest hectare in Santa Rosa National Park, Costa Rica. Intl. Org. Paleobotany Conference V.
- Kowalski, E. and Burnham, R.J. 1997. Miocene *Coussapoa* (Cecropiaceae) from the Nabon Basin, Ecuador, South America. Midcontinent Paleobotanical Colloquium, Athens, OH.
- Burnham, R.J. and A. Graham 1997. The History of Neotropical vegetation: new developments and status. Annual Symposium of the Missouri Botanical Garden, October 1997.
- Burnham, R.J. 1998. The Great American Interchange: Does the plant record echo the mammalian record? Midcontinent Paleobotanical Colloquium, Denver, CO.
- Burnham, R.J., Nigel C. A. Pitman, and Kirk R Johnson. 2000. Habitat-related error in estimating temperatures from leaf margins in a humid tropical forest. Midcontinent Paleobotanical Colloquium, Chapel Hill, NC.
- Burnham, R.J. 2000. Bejucos del Parque Nacional Yasuní y su importancia en los bosques tropicales. III Congreso Botánico del Ecuador, Quito, Ecuador.
- Kowalski, E. A. y R.J. Burnham 2000 La Flora y Vegetación del Mioceno Superior de la cuenca de Nabón, Ecuador. III Congreso Botánico del Ecuador, Quito, Ecuador.
- Burnham, R.J. 2002. Alpha and beta diversity of lianas in Yasuní National Park, Ecuador. Association for Tropical Biology Annual Meeting; Panama City, Panama.
- Burnham, R.J. 2003. Amazon Basin Angiosperms from Low Altitudes in the Bolivian Andes. Midcontinent Paleobotanical Colloquium, Chicago, IL
- Burnham, R.J. 2003. Blowing in the wind: abiotic dispersal, ecology, and phylogeny in South American Tertiary Floras. Geological Society of America, Seattle, WA.
- Burnham, R.J. and K. R. Johnson 2004. Biological hotspots: South American paleobotany and the origins of neotropical rainforests. Plant Phylogeny and the Origin of Major Biomes, Conference by the Royal Society of London, March 2004.
- Burnham, R.J., K. R. Johnson, and B. Ellis 2004. Modern tropical forest taphonomy: How does high biodiversity affect paleoclimatic interpretations? International Organization for Paleobotany Conference, Bariloche, Argentina, March 2004.
- Burnham, R.J. 2006. Hide and Go Seek: What Does Presence Mean in the Fossil Record? BSA Meetings, Chico, CA August 2006.B
- Strömberg, C.A.E. Wing, S.L., Hickey, L.J., Behrensmeyer, A.K., Tiver, F., Willis, B.J. and Burnham, R.J. 2007. The ecological role of angiosperms in Late Cretaceous vegetation at Big Cedar Ridge, Wyoming. BSA Meetings, Chicago, IL August 2007.
- Burnham, R.J. 2009. Lianas of the Upper Amazon: Comparison of climber communities from Los Amigos, Peru and Yasuní, Ecuador. Association for Tropical Biology and Conservation, Marburg, Germany, July 2009.
- Burnham, R.J., L.G. Lohmann, F. Gomes-Silva, S. Schramm, and U. Li 2010. Phylogenetic signal in the acarodomatia of neotropical Lianas. Association for Tropical Biology and Conservation, Bali, Indonesia July 2010.
- Smith, S.Y., S.A. Little, R.J. Burnham, and R.A. Stockey 2010. A woody axis with liana anatomy from the Cretaceous of Hornby Island, British Columbia. Botanical Society of America, Providence RI. August 2010.
- Burnham, R.J., L.G. Lohmann, F. Gomes-Silva, and U. Li 2010. Sinais filogenéticos em Acarodomácias de Lianas Neotropicais. 61^o Congresso Nacional de Botânica Sociedade Botânica do Brasil, Manaus, Brazil, August 2010.
- Marvin, D.C., K. Winter, S.A. Schnitzer, and R.J. Burnham 2011. Tropical lianas and trees under elevated CO₂: Growth and physiological response. ESA Annual Meeting, Austin TX, 2011.
- Vilela Santos, M.C., D.J. Rodrigues, F. Costa, and R.J. Burnham 2011. Distribuição e estimativa de estoque de carbono de lianas em áreas com diferentes histórico de manejo florestal na

Amazônia Mato-grossense. Poster: Nucleo de Estudos de Biodiversidade da Amazonia Mato-grossense (NEBAM).

Burnham, R.J. M.C. Vilela Santos, and C.V. Santanna, C.V. 2012. Mapping Oligarchic Lianas in Amazonia: Geographically Significant Biodiversity. 49th Association for Tropical Biology Meeting, Bonito, Mato Grosso do Sur, Brazil 18-22 June 2012

Burnham R.J., M.C.Vilela Santos, C.V. Santanna, and J.B. Silva The geographic distribution of locally dominant liana species in Amazonian forests. 49th Association for Tropical Biology Meeting, Bonito, Mato Grosso do Sur, Brazil 18-22 June 2012.

Burnham, R.J. and M.C. Vilela Santos Diversidade de lianas e seus bioprodutos. V SIMPÓSIO MATOGROSSENSE DA AMAZÔNIA MERIDIONAL EM CIÊNCIAS AMBIENTAIS, 2012.

Burnham R.J., and M.C. Vilela Santos To be a tree or liana: The influence of seasonal precipitation on the distribution of *Machaerium* species. 2013: 50th ATBC – San Jose, Costa Rica.

Polisel, R.T., R.J. Burnham, F.R. Martins Climbing plants in the Neotropics: still undersampled and poorly understood. XI Congreso Latinoamericano de Botânica, October, Bahia, Brazil 2014

Burnham, R.J. Crossing over from tree to liana, and back again: a case study in distribution of the genus *Machaerium* (Fabaceae). *New Perspectives on Climbing Plants: A Symposium at the Linnean Society of London*. October 22-24, 2014

Burnham, R.J., M.C.V. dos Santos, D. de J. Rodrigues. 2015 Lianas da Amazônia: Importância no ciclo do carbon, na saúde humana e nos ecossistemas terrestres. SIMAMCA V. Sinop, Mato Grosso, Brazil.

ORGANIZED WORKSHOPS AND MEETINGS

Mid-Continent Paleobotanical Colloquium May 2017, Ann Arbor, Michigan (Co-organizer: Dr. Selena Y. Smith)

NCEAS (National Center for Ecological Analysis and Synthesis) Working Group on Lianas and Tropical Forest Dynamics. February, 2005 and April, 2006. Santa Barbara California.

Workshop Organizer: Techniques for Assessing Biodiversity, sponsor: Museo de Historia Natural, Lima Peru & Smithsonian Institution. Sept. 10-24, 1990, Lima and Tambopata, Peru.

Workshop Organizer: Techniques for Assessing Biodiversity: sponsored by the Smithsonian Institution and the Facultad de Ciencias Biologicas y Geografia UNSAAC. Jan. 27 - Feb. 10, 1992 in Cusco and Tambopata, Peru.

Popular Articles & Press Coverage

Andrade, R.O. 2014. Florestas em transformação. Outubro 2014 Pesquisa FAPSEP 224:54-57.

Burnham, R.J. 2010. Huyck Preserve Climbers. *Myosotis Messenger* Autumn 2010

TEACHING

2017 Introduction to Biology I: Evolution & Ecology (Biology 171)

2005 - 2016 Plant Diversity – Biology 255, U. of Michigan

1997 - 2016 Neotropical Plants – Ecology & Evolutionary Biology 463, U. of Michigan

2014 Ethics for the Natural Sciences, UC415, U. of Michigan

2012 Plant Biology – Biology 230, U. of Michigan

2000 Topics in Plant Morphology: An Organographic Approach, U. of Michigan

1998 Tropical Field Ecology - for Boston University Program Abroad in Ecuador

1995, 1996, 1999, 2001, 2003, 2004 Spring Flora - Biology 215, U. of Michigan

1997 Organization for Tropical Studies Undergraduate Program - Resource Biologist

1995, 1997 General Biology - Biology 154, U. of Michigan

1994 Directed Reading in Evolutionary Biology - Biology 730 U. of Michigan

1994, 1995 Honors Biology -Biology 195 - U. of Michigan

1993 Plant Biology - Biology 255 U. of Michigan

1993, 1994 Morphology and Evolution of Vascular Plants Biology 461-U. of Michigan

1992, 1993, 1996 Terrestrial Ecosystems Through Time Biology 800 U. of Michigan

1987 Survey of the Plant Kingdom - Botany 220 U. of Washington

1984 Short Course on Paleocological Methods U. of Washington

FIELD RESEARCH

2007-2017 Temperate climbing plants across latitudinal gradients: CLIMBERS

2008 -2017 Collaboration with USP, INPA, & UFMT, Brazil on Amazonian forest lianas

1993, 1995-2008 Modern Lianas: systematics & ecological distribution of climbers in Amazonian forests, Ecuador and Paleobotanical research in Andean sedimentary basins of Ecuador

2002 Field surveys of lianas of Caixuana, Para, Brazil. Sponsored by Missouri Botanical Garden.

1999-2006 Initiation of long-term study of climbing plants in the Department of Manu, Peru.

1998 & 2001 Research on Miocene fossil plants in the altiplano & eastern lowlands of Bolivia.

1994 Dry forest research: Santa Rosa National Park, Costa Rica and Estación de Biología de Chamela, Mexico.

1990-94 Paleobotanical research in the Raton Basin of New Mexico.

1988-92 Tropical Forest Research: Manu N.P., Peru; Carrie Bow, Belize; Barro Colorado Island, Panama. Plant collecting, forest mapping, litter collection, sediment coring.

1988-92 Paleobotanical Research Bighorn Basin Wyoming. Collaboration on research utilizing results from modern taphonomic research with S.L. Wing.

1988-89 Temperate Forest Research at Smithsonian Environmental Research Center, Edgewater, Maryland. Forest mapping and plant litter collection.

1984-87 Geological Field Research in King County, Washington. Investigation of sedimentary environment of megafossil floras.

1983-86, 1992 Tropical Field Research: San Pedro River, Tabasco, and Volcan Chichón, Chiapas, Mexico. Plant collecting, sediment coring, plant litter.

INVITED SEMINARS, COURSES, & SYMPOSIA

Royal Society of London & Goldsmiths' College, University of London, March 1985.

Society of Economic Paleontologists and Mineralogists -A.A.P.G. Atlanta: June 1986.

Paleobotanical Section, A.I.B.S. Short Course on Paleocological Methods, August 1987.

Chicago Field Museum, Department of Geology. February 1988.

Arizona State University, Department of Botany and Microbiology. March 1988.

State University of New York at Binghamton, Biology. October 1989.

University of Pennsylvania, Geology. November 1989.

University of New Mexico, Biology. February 1990 and December 1990.

University of Florida, Gainesville, Museum of Natural History. April 1991.

Royal Society of Edinburgh Symposium on East Kirkton Exceptional Biota. September 1992.

Bowling Green State University, Geology. October 1992.

Universidad Nacional Autonoma de Mexico, Instituto de Geologia. March 1994.

University of Michigan, Department of Geology. April 1994.

University of Iowa, Departments of Biology and Geology. October 1994.

Universidad Nacional del Ecuador, Departamento de Biología. February 1995.

Pontificia Universidad Catolica del Ecuador, August 1996.

Michigan State University, Ecology and Evolutionary Biology Program, November 1996.

Pontificia Universidad Catolica del Ecuador, April 1997.

Organization of Tropical Studies Undergraduate Program, Costa Rica, October 1997.

Missouri Botanical Garden Fall Symposium November, 1997.

Universidad San Francisco de Quito, Departamento de Ciencias Ambientales, December 1998

Herbario Nacional de Ecuador (QCNE) March 2000

Universidad San Francisco de Quito, Departamento de Ciencias Ambientales, March 2000

Univ. Washington, Department of Botany, Sept. 2000, Invited Speaker: 100 Years of Botany

Univ. of California, Berkeley, Integrative Biology, April 2001 Jane Gray Memorial Lecture

Univ. of California, Berkeley Winter 2001 - Plant Biology Group

Duke University, Systematics Series Seminar Speaker, October 2002

Mid-Continent Paleobotanical Colloquium, Chicago Illinois, May 2003

Geological Society of America, South American Biota Symposium, Seattle, November 2003
 Royal Society of London, Plant Phylogeny and the Evolution of Major Biomes, March 2004
 Intl. Org. of Paleobotany Symposium on Plant Taphonomic Processes, Argentina, March 2004
 College of the Atlantic, Bar Harbor, ME - College Invited Speaker -November 2004
 Smithsonian Tropical Research Institution - Invited Speaker, Panama, December 2004
 Cornell University – Colloquium Invited Speaker April 3, 2006.
 University of Sao Paolo, Section of Ecology Invited Speaker December 19, 2008
 Calvin College Biology Department Seminar, April, 2009
 INPA (Manaus, Brazil) PDBFF-Plant Biology, December 11, 2009
 Michigan Tech University March 22, 2011 School of Forest Resources & Environmental Science.
 Universidade Federal do Mato Grosso, Sinop, Mato Grosso, Invited Speaker, December 9, 2011
 SIMAMCA V (Simpósio da Amazonia Meridional em Ciencias Ambientais), Sinop, MT, Brazil
 Keynote Speaker, August, 2012
 INPA (Manaus, Brazil) Invited Speaker April 1, 2013
 Cornell University, Department of Plant Biology, Invited Speaker November 1, 2013
 SIMAMCA VII (Simpósio da Amazonia Meridional em Ciencias Ambientais), Sinop, MT, Brazil
 Speaker, August, 2015
 Training Course on 25-ha Center for Tropical Science Plot PDBFF, Manaus January 2017
 Lianas and their Importance in Amazonian Biodiversity and Ecology; Universidade Federal do Mato
 Grosso, Sinop, MT, Brazil November 27 – December 7, 2017

RECENT DEPARTMENTAL SERVICE

EEB Frontiers Admissions Committee and EEB Social Committee, Retreat Committee 2015-2017
 EEB Graduate Affairs Committee 2012-2014
 EEB Curriculum Committee 2003-2004; 2007-2011
 EEB Executive Committee 2004-2006;
 EEB Diversity Committee 2004-2006;
 EEB Herbarium Search Committee & Fungal Systematics Committee: 2003-5;
 EEB and Herbarium Search Committee for Plant Systematist (2 positions) 2004-2005

LOCAL EXTRA-DEPARTMENTAL SERVICE

Director E.S. George Reserve, University of Michigan, Term 2017- XX
 Academic Judiciary Committee Term 2010-2013
 UM LSA College Curriculum Committee 2008-2010
 Explorathon Keynote Speaker, American Association for Women in Science March 2007
 LSA Award for Excellence in Teaching – Award 2006
 Faculty Advisor to UM-SEEDS Undergraduate Ecology Group 2006-2010
 Faculty Advisor to Society of Biology Students, University of Michigan 2003
 University of Michigan Senate Assembly Term 1995-1998
 Paleobotanical Advisor to Exhibit Museum: Renovation of Plant Exhibits 1994-present
 Search Committees: Geological Sciences and Ecology & Evolutionary Biology
 Docent Training Lecturer, Matthaei Botanical Gardens 1994-1996
 Geology Department (U of Michigan) Turner Award Committee 1992-1995
 Scientific Advisor to the Hands-On Museum, Ann Arbor, MI 1992-1994