

Name: S. Joseph Wright

Present Position: Research Biologist
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Education:

A.B. Princeton University, 1974

Ph.D. University of California at Los Angeles, 1980

International Service (1998-2003):

President elect, Association for Tropical Biology and Conservation (2003 for 3-yr term)

Associate Editor for the 'Journal of Ecology' of the British Ecological Society (1997 to present)

Associate Editor for 'Biotropica' (2001 to present)

Program Chair, Annual meeting of the Assoc for Tropical Biology, Panama (2002)

Co-convenor, Third International Canopy Conference, Cairns, Australia (2002)

Council Member, Association of Tropical Biology (1997 to 1999)

Smithsonian Service (significant; requiring > 2000 hours or *one full work year each*):

Scientist-in-charge, Canopy Biology Program (1992 to present)

Scientist-in-charge, Terrestrial Environmental Sciences Program (1993 to present)

Acting Deputy Director, Smithsonian Tropical Research Institute (2001-2002)

Supervisor of 20 game wardens, Barro Colorado Nature Monument (1987-1991)

Scientist-in-charge, Barro Colorado Nature Monument (1983-1988)

Research Grants (1998-2003):

- 2001-2006 Interannual seed rain variability, dispersal limitation, seed/seedling mortality in a Southeast Asian rainforest: implications for the maintenance of tree diversity (NSF DEB 0108388 with S. Hubbell, PI; \$400,000)
- 2003-2005 The myriad consequences of hunting for vertebrates and plants in tropical forests. (Smithsonian Tropical Research Inst, \$45,000)
- 2002-2005 The Life Histories of Tropical Trees (Andrew W. Mellon Foundation, \$97,000)
- 2002-2003 Workshops to Articulate and Disseminate Research Priorities in Tropical Biology (NSF DEB-0211380 with K. S. Bawa, N. M. Nadkarni and W. J. Kress; \$24,000)
- 1999-2002 Soil fertility and the productivity of a tropical moist forest (Andrew W. Mellon Foundation, \$127,000)
- 1998-2001 The carbon balance of tropical forest canopies (Lounsberry Foundation, PI with Klaus Winter and Steve Mulkey, co-PIs; \$150,000)
- 1998-2000 Light augmentation of canopy trees in a tropical wet forest (NSF IBN-9805908 with Steve Mulkey, PI; \$50,000)
- 1997-2001 Integration of canopy and hydraulic architecture in Psychotria species along light and moisture gradients (NSF IBN-9604424 with R. Pearcy, PI, and M. Tyree, co-PI; \$270,000)
- 1998-2003 The long-term dynamics of plant reproduction in tropical moist forest (Smithsonian Environmental Sciences Program; \$230,000)
- 1997-1999 Nutrient Augmentation of a Tropical Forest (Smithsonian Scholarly Studies; \$70,000)

Publications (3 books, 88 journal articles, 21 book chapters, 5 others):

Wright, S. J., O. Calderón, A. Hernández and S. Paton. 2004. Are lianas increasing in importance in tropical forests? A 17-year record from Panamá. **Ecology** 85: in press.

Wright, S. J., H. C. Muller-Landau, R. Condit and S. P. Hubbell. 2004. Gap-dependent recruitment, realized vital rates, and size distributions of tropical trees. **Ecology** 85: in press

Van Bael, S., A. Aiello, A. Veladerrama, E. Medianero, M. Samaniego and S. J. Wright. in press. Community-wide outbreak of herbivores in a lowland neotropical forest following an El Niño related drought. **Journal of Tropical Ecology**

Pearcy, R. W., F. Valladares, S. J. Wright and E. Lasso P. in press. A functional analysis of the crown architecture of tropical forest *Psychotria* species: do species vary in light capture efficiency and consequently in carbon gain and growth. **Oecologia**

Wright, S. J. in press. The El Niño Southern Oscillation influences tree performance in tropical rain forests. Pages XXX-XXX in C. Moritz and E. Bermingham, editors. Rain forests: past and future. University of Chicago Press.

Muller-Landau, H., J. Dalling, K. Harms, S. J. Wright, R. Condit, S. P. Hubbell and R. Foster. in press. Disentangling the effects of dispersal patterns, density dependent mortality, and habitat preferences on the distributions of seedlings. Pages XXX-XXX in E. Losos and R. Condit, editors. The demography of tropical forest plants. Smithsonian Institution Press.

Kitajima, K., S. S. Mulkey and S. J. Wright. In press. Variation in crown light utilization characteristics among tropical canopy trees. **Annals of Botany**

Milton, K., J. Giacalone and S. J. Wright. In press. Do population fluctuations of neotropical frugivores reflect fruit production estimates? Evidence from Barro Colorado Island. Pages XXX-XXX in J. L. Dew and J. P. Boubli, editors. Floristics, phenology and frugivore communities: a pantropical comparison. Kluwer.

Basset, Y., V. Horlyck and S. J. Wright, editors. In press. Studying Forest Canopies from Above: The International Canopy Crane Network. Editorial Panamericana de Colombia, Bogota. 200 pp. (ISBN 9962-614-05-8)

Yavitt, J. B., S. J. Wright and R. K. Wieder. In press. Seasonal drought and dry-season irrigation influence leaf litter nutrients and soil enzymes in a moist, lowland forest in Panama. **Austral Ecology**.

Wright, S. J. 2003. The myriad effects of hunting for vertebrates and plants in tropical forests. **Perspectives in Plant Ecology, Evolution and Systematics** 6: 73-86.

Ozanne, C.M.P., D. Anhof, S. L. Boulter, M. Keller, R. L. Kitching, C. Körner, F. C. Meinzer, A. W. Mitchell, T. Nakashizuka, P. L. Silva Dias, N. E. Stork, S. J. Wright and M.

- Yoshimura. 2003. Biodiversity meets the atmosphere: a global view of forest canopies. **Science** 301: 183-186.
- Graham, E. A., S. S. Mulkey, K. Kitajima, N. G. Phillips and S. J. Wright. 2003. Cloud cover limits net CO₂ uptake and growth of a rainforest tree during tropical rainy seasons. **Proceedings of the National Academy of Science** 100: 572-576.
- Dominy, N. J., P. W. Lucas and S. J. Wright. 2003. Mechanics and chemistry of rain forest leaves: canopy and understorey compared. **Journal of Experimental Botany** 54: 2007-2014.
- Kitajima, K., S. S. Mulkey, M. Samaniego and S. J. Wright. 2002. Decline of photosynthetic capacity with leaf age and position in two tropical pioneer tree species. **American Journal of Botany** 89: 1925-1932.
- Ibáñez, R., R. Condit, G. Angehr, S. Aguilar, T. Garcia, R. Martínez, A. Sanjur, R. Stallard, S.J. Wright, A.S. Rand, and S. Heckadon. 2002. An ecosystem report on the Panama Canal: monitoring the status of the forest communities and the watershed. **Environmental Monitoring and Assessment** 80: 65-95.
- Ruokolainen, K., H. Tuomisto, J. Chave, H. C. Muller-Landau, R. Condit, N. Pitman, J. Terborgh, S. P. Hubbell, E. G. Leigh, Jr., J. F. Duivenvoorden, J.-C. Svenning, and S. J. Wright. 2002. Beta-diversity in tropical forests. **Science** 297: 1439-1440.
- DeSteven, D. and S. J. Wright. 2002. Consequences of variable reproduction for seedling recruitment in three neotropical tree species. **Ecology** 83: 2315-2327.
- Dalling, J. W., H. C. Muller-Landau, S. J. Wright and S. P. Hubbell. 2002. Role of dispersal in the recruitment limitation of neotropical pioneer species. **Journal of Ecology** 90: 714-727.
- Engelbrecht, B.M.J., S. J. Wright and D. DeSteven. 2002. Survival and ecophysiology of rainforest tree seedlings during El Niño drought in a tropical moist forest in Panama. **Journal of Tropical Ecology** 18: 569-579.
- Wright, S. J. 2002. Fort Sherman and Parque Metropolitano canopy cranes, Panama. Pages 72-76 in A. Mitchell, K. Secoy, and T. Jackson, eds. The global canopy handbook. Global Canopy Foundation, Oxford.
- Yavitt, J. B. and S. J. Wright. 2002. Charge characteristics of soil in a lowland tropical moist forest in Panama in response to dry-season irrigation. **Australian Journal of Soil Research** 40: 269-281.
- Newell, E., S. S. Mulkey and S. J. Wright. 2002. Seasonal patterns of carbohydrate storage in four tropical tree species. **Oecologia** 131: 333-342.

- Duivenvoorden, J. F., J.-C. Svenning and S. J. Wright. 2002. Beta diversity in tropical forests. **Science** 295: 636-637.
- Wright, S. J. 2002. Plant diversity in tropical forests: a review of mechanisms of species coexistence. **Oecologia** 130: 1-14.
- Wright, S. J. 2002. La influencia del fenómeno climático de El Niño sobre la fenología del bosque neotropical. Pages 418-419 in M. R. Guariguata and G. Kattan, editors. Ecología y conservación de bosques neotropicales. Libro Universitario Regional, Cartago, Costa Rica.
- Muller-Landau, H. C., S. J. Wright, O. Calderón, S. P. Hubbell, R. B. Foster. 2002. Assessing recruitment limitation: Concepts, methods, and case studies from a tropical forest. Pages 35-53 in D. J. Levey, W. R. Silva and M. Galetti, editors. Seed dispersal and frugivory: ecology, evolution and conservation. CAB International, Oxfordshire, UK.
- Wright, S. J. and H. C. Duber. 2001. Poachers and forest fragmentation alter seed dispersal, seed survival, and seedling recruitment in the palm *Attalea butyraceae*, with implications for tropical tree diversity. **Biotropica** 33: 583-595.
- Yavitt, J. B. and S. J. Wright. 2001. Drought and irrigation effects on fine root dynamics in a tropical moist forest, Panama. **Biotropica** 33: 421-434.
- Terwilliger, V. J., K. Kitajima, D. J. Le Roux-Swarthout, S. Mulkey, and S. J. Wright. 2001. Intrinsic water-use efficiency and heterotrophic investment in leaf growth of two Neotropical pioneer tree species as estimated from $\delta^{13}\text{C}$ values. **New Phytologist** 152: 267-281.
- Wright, S. J. 2001. General flowering: experiments to distinguish among possible proximate cues. Pages 8-14 in T. Ichioka, T. Nakashizuka, and L. Chong, editors. Canopy Processes and ecological roles of tropical rain forest. Japan Science Technology Corp., Tokyo.
- Wright, S. J. 2001. El fenómeno de El Niño y los bosques de isla Barro Colorado. Pages 112-116 in S. Heckadon-Moreno, editor. Panamá: Puente biológico. Imprelibros, S. A., Colombia.
- Miriti, M. N., S. J. Wright and H. F. Howe. 2001. The effects of neighbors on the demography of a dominant desert shrub (*Ambrosia dumosa*). **Ecological Monographs** 71: 491-509.
- Condit, R., W. D. Robinson, R. Ibáñez, S. Aguilar, A. Sanjur, R. Martínez, R. Stallard, T. García, G. Angehr, L. Petit, S. J. Wright, T. R. Robinson and S. Heckadon. 2001. The canal watershed and its biodiversity: Its status as Panama enters the 21st century. **Bioscience** 51: 135-144.
- Terwilliger V. J., K. Kitajima, D. J. Le Roux-Swarthout, S. Mulkey, and S. J. Wright. 2001. Influences of heterotrophic and autotrophic resource use on carbon and hydrogen isotopic compositions of tropical tree leaves. **Isotopes in Environmental and Health Studies** 37:

133-160.

Wright, S. J. 2001. Density dependence among tropical trees: case studies from Barro Colorado Island, Panama. Pages 239-242 in K.N. Ganeshaiyah, R. Uma Shaanker and K. S. Bawa, editors. Tropical ecosystems: structure, diversity and human welfare. Oxford and IBH Publishing Co., New Delhi.

Valladares, F., S. J. Wright, E. Lasso and R. W. Pearcy. 2000. Phenotypic plasticity in response to light environment in 16 species of tropical rainforest shrubs (*Psychotria*) with different leaf longevities and shade and drought tolerances. **Ecology** 81: 1925-1936.

Harms, K.E., S.J. Wright, O. Calderón, A. Hernández and E. A. Herre. 2000. Pervasive density-dependent recruitment enhances seedling diversity in a tropical forest. **Nature** 404: 493-495.

Wright, S. J., H. Zeballos, I. Domínguez, M. M. Gallardo, M. C. Moreno and R. Ibáñez. 2000. Poachers alter mammal abundance, seed dispersal and seed predation in a Neotropical forest. **Conservation Biology** 14: 227-239.

Ibáñez, R, G. Angehr and S. J. Wright. 1999. Las poblaciones de animales vertebrados. Pages 47-55 in S. Heckadon-Moreno, R. Ibáñez and R. Condit, editors. La cuenca del canal: deforestación, urbanización y contaminación. Imprelibros, Colombia.

Cavelier, J., S. J. Wright and J. Santamaria. 1999. Effects of irrigation on fine root biomass and production, litterfall and trunk growth in a semideciduous lowland forest in Panama. **Plant and Soil** 211: 207-213.

Phillips, N., R. Oren, R. Zimmermann, and S. J. Wright. 1999. Temporal patterns of water flux in trees and lianas in a Panamanian moist forest. **Trees** 14: 116-123.

Meinzer, F. C., J. L. Andrade, G. Goldstein, N. M. Holbrook, J. Cavelier and S. J. Wright. 1999. Partitioning of soil water among canopy trees in a seasonally dry tropical forest. **Oecologia** 121: 293-301.

Wright, S. J., C. Carrasco, O. Calderón and S. Paton. 1999. The El Niño Southern Oscillation, variable fruit production and famine in a tropical forest. **Ecology** 80: 1632-1647.

Poulin, B., S. J. Wright, G. Lefebvre and O. Calderón. 1999. Interspecific synchrony and asynchrony in the fruiting phenologies of congeneric bird-dispersed plants in Panama. **Journal of Tropical Ecology** 15: 213-227.

Hubbell, S. P., R. B. Foster, S. T. O'Brien, K. E. Harms, R. Condit, B. Weschler, S. J. Wright and S. Loo de Lao. 1999. Light gap disturbances, recruitment limitation, and tree diversity in a neotropical forest. **Science** 283: 554-557.

Wright, S. J. 1999. Plant diversity in tropical forests. Pages 449-472 in F. I. Pugnaire and F.

- Valladares, editors. Handbook of Functional Plant Ecology. M. Dekker, New York.
- Miriti, M. N., H. F. Howe and S. J. Wright. 1998. Population pattern and mortality in a desert perennial plant community. **Plant Ecology** 136: 41-51.
- Stork, N. E., S. J. Wright and S. S. Mulkey. 1997. Craning for a better view: the canopy crane network. **Trends in Ecology and Evolution** 12: 418-420.
- Kitajima, K., S. S. Mulkey and S. J. Wright. 1997. Decline of photosynthetic capacity with leaf age in relation to leaf longevities for five tropical canopy tree species. **American Journal of Botany** 84: 702-708.
- Kitajima, K., S. S. Mulkey and S. J. Wright. 1997. Seasonal leaf phenotypes in the canopy of a dry tropical forest: photosynthetic characteristics and associated traits. **Oecologia** 109: 490-498.
- Asquith, N. M., S. J. Wright and M. J. Claus. 1997. Does mammal community composition control seedling recruitment in neotropical forests? Evidence from islands in central Panama. **Ecology** 78: 941-946.
- Wright, S. J. and M. Colley. 1996. Tropical Forest Canopy Programme. United Nations Environment Program, Nairobi, Kenya.
- Yavitt, J. B. and S. J. Wright. 1996. Temporal patterns of soil nutrients in a Panamanian moist forest revealed using ion-exchange resins and experimental irrigation. **Plant and Soil** 183: 117-129.
- Mulkey, S. S., K. Kitajima and S. J. Wright. 1996. Plant physiological ecology of tropical forest canopies. **Trends in Ecology and Evolution** 11: 408-412.
- Wright, S. J. 1996. Plant species diversity and ecosystem functioning in tropical forests. Pages 11-31 in (G. H. Orians, R. Dirzo and J. H. Cushman, eds.). Biodiversity and Ecosystem Processes in Tropical Forests. Springer-Verlag, Berlin.
- Mulkey, S. S. and S. J. Wright. 1996. Influence of seasonal drought on the carbon balance of tropical forest plants. Pages 187-216 in S. S. Mulkey, R. L. Chazdon and A. P. Smith, eds. Tropical forest plant ecophysiology. Chapman and Hall, New York.
- Wright, S. J. 1996. Phenological responses to seasonality in tropical forest plants. Pages 440-460 in S. S. Mulkey, R. L. Chazdon and A. P. Smith, eds. Tropical forest plant ecophysiology. Chapman and Hall, New York.
- Orians, G. H., R. Dirzo, J. H. Cushman, E. Medina and S. J. Wright. 1995. Tropical forests. Pages 339-345 in V. H. Heywood and R. T. Watson, eds. Global Biodiversity Assessment. Cambridge University Press, Cambridge, England.

- Wright, S. J. and R. Dirzo. 1995. Why are there so many plant species in tropical rain forests? Pages 249-250 in V. H. Heywood and R. T. Watson, eds. *Global Biodiversity Assessment*. Cambridge University Press, Cambridge, England.
- Kursar, T. A., S. J. Wright and R. Radulovich. 1995. The effect of irrigation during the dry season on soil oxygen and gravimetric soil water content in a tropical moist forest. **Journal of Tropical Ecology** 11: 497-516.
- Devall, M. S., B. R. Parresol and S. J. Wright. 1995. Dendroecological analysis of *Cordia alliodora*, *Pseudobombax septanatum* and *Annona spraguei* in central Panama. **International Association of Wood Anatomists Journal** 16: 411-424.
- Wright, S. J. and O. Calderon. 1995. Phylogenetic constraints on tropical flowering phenologies. **Journal of Ecology** 83: 937-948.
- Wright, S. J. 1995. Canopy crane: methods. Page 15. in (M. Lowman and N. Nadkarni, eds.). *Forest canopies*. Academic Press, New York, USA.
- Wieder, R. K. and S. J. Wright. 1995. Mass balance estimates of litter decomposition in a moist forest on Barro Colorado Island, Panama: effects of dry-season irrigation. **Ecology** 76: 1971-1979.
- Lowman, M., F. Hallé, B. Bouricius, P. Coley, N. Nadkarni, G. Parker, K. Saterson and S. J. Wright. 1995. What's up? Perspectives from the first international forest canopy conference at Sarasota, Florida, 1994. **Selbyana** 16: 1-11.
- Tissue, D. T. and S. J. Wright. 1995. Effect of seasonal water availability on phenology and the annual shoot carbohydrate cycle of tropical forest shrubs. **Functional Ecology** 9: 518-527.
- Mulkey, S. S., K. Kitajima and S. J. Wright. 1995. Photosynthetic capacity and leaf longevity in the canopy of a dry tropical forest. **Selbyana** 16: 169-173.
- Wright, S. J. and M. Colley. 1994. *Accessing the canopy*. United Nations Environment Program, Nairobi, Kenya, 88 pp.
- Wright, S. J., M. E. Gompper and B. DeLeon. 1994. Are large predators keystone species in Neotropical forests? The evidence from Barro Colorado Island. **Oikos** 71: 279-294.
- Cornejo, F. H., A. Verala and S. J. Wright. 1994. Tropical forest litter decomposition under seasonal drought: nutrient release, fungi and bacteria. **Oikos** 70: 183-190.
- Wright, S. J. and C. P. van Schaik. 1994. Light and the phenology of tropical trees. **American Naturalist** 143: 192-199.
- Mulkey, S. S., S. J. Wright and A. P. Smith. 1994. Comparative physiology and demography of three Neotropical forest shrubs: alternative shade-adaptive character syndromes. **Oecologia**

96: 526-536.

- Terborgh, J. and S. J. Wright. 1994. Effects of mammalian herbivores on plant recruitment in two Neotropical forests. **Ecology** 75: 1829-1833.
- Andrews, R. M. and S. J. Wright. 1994. Long-term population fluctuations of a tropical lizard: a test of causality. Pages 267-285 in (L. J. Vitt and E. R. Pianka, eds.). *Lizard ecology: historical and experimental perspectives*. Princeton Univ Press, Princeton, NJ.
- Van Schaik, C. P., J. W. Terborgh and S. J. Wright. 1993. The phenology of tropical forests: adaptive significance and the consequences for primary consumers. **Annual Review of Ecology and Systematics** 24: 353-377.
- Yavitt, J. B., R. K. Wieder and S. J. Wright. 1993. Soil nutrient dynamics in response to irrigation of a Panamanian tropical moist forest. **Biogeochemistry** 19: 1-25.
- Leigh, E. G., Jr., S. J. Wright, F. E. Putz, and A. E. Herre. 1993. The decline of tree diversity on newly isolated tropical islands: a test of a null hypothesis and some implications. **Evolutionary Ecology** 7: 76-102.
- Wolda, H. and S. J. Wright. 1992. Artificial dry season rain and its effects on tropical insect abundance and seasonality. **Proceedings van de Koninklijke Nederlandse Akademie van Wetenschappen** 95: 535-548.
- Wright, S. J. 1992. Seasonal drought, soil fertility and the species density of tropical forest plant communities. **Trends in Ecology and Evolution** 7: 260-263.
- Mulkey, S., A. P. Smith, S. J. Wright and J. L. Machado. 1992. Fixed polyphenism controls water loss during drought in a tropical forest shrub. **Proceedings of the National Academy of Science (USA)** 89: 9084-9088.
- Wright, S. J., J. L. Machado, S. Mulkey and A. P. Smith. 1992. Drought acclimation among tropical forest shrubs (Psychotria, Rubiaceae). **Oecologia** 89: 457-463.
- Mulkey, S. S., A. P. Smith, and S. J. Wright. 1991. Comparative life history and physiology of two understory Neotropical herbs. **Oecologia** 88: 263-273.
- Wright, S. J. 1991. Seasonal drought and the phenology of understory shrubs in a tropical moist forest. **Ecology** 72: 1643-1657.
- Fisher, B., H. F. Howe and S. J. Wright. 1991. Survival and growth of Virola surinamensis yearlings: Water augmentation in gap and understory. **Oecologia** 86: 292-297.
- Mulkey, S. S., S. J. Wright and A. P. Smith. 1991. Drought acclimation of an understory shrub in a tropical moist forest. **American Journal of Botany** 78: 579-587.

- Wright, S. J. and F. H. Cornejo. 1990. Seasonal drought and the timing of leaf fall in a tropical forest. **Ecology** 70: 1165-1175.
- Wright, S. J. and F. H. Cornejo. 1990. Seasonal drought and the timing of flowering and leaf fall in a neotropical forest. Pages 49-61 in The Reproductive Biology of Tropical Forest Plants. K Bawa and M. Hadley (eds.). Man and the Biosphere Series, UNESCO, Paris and Parthenon Publishing, Carnforth, England.
- Putz, F.E., E.G. Leigh, Jr. and S.J. Wright. 1990. Solitary confinement in Panama. **Garden** 14: 18-23.
- Wright, S. J. 1990. Cumulative satiation of a seed predator over the fruiting season of its host. **Oikos** 58: 272-276.
- Wong, M., S. J. Wright, S. P. Hubbell and R. F. Foster. 1990. The spatial pattern and reproductive consequences of outbreak defoliation in Quararibea asterolepsis, a tropical tree. **Journal of Ecology** 78: 579-588.
- Wright, S. J. 1990. Conservation in a variable environment: the optimal size of reserves. Pages 187-196. in Living in a Patchy Environment. B. Shorrocks and A. Swingland (eds.). Oxford University Press.
- Leigh, E. G., Jr. and S. J. Wright. 1990. The role of Barro Colorado Island in tropical biology. Pages 28-47. in Four Neotropical Forests. A. H. Gentry (ed.). Yale University Press.
- Sternberg, L. S. L., S. S. Mulkey and S. J. Wright. 1989. Ecological interpretation of leaf carbon isotope ratios: influence of respired carbon dioxide. **Ecology** 70: 1317-1324.
- Sternberg, L.S.L., S. S. Mulkey and S. J. Wright. 1989. Oxygen isotope ratio stratification in a tropical moist forest. **Oecologia** 81: 51-56.
- Wright, S. J. 1988. Patterns of abundance and the form of the species-area relation. **American Naturalist** 131: 401-411.
- * Hamill, D. N. and S. J. Wright. 1988. Interspecific interaction and similarity in species composition. **American Naturalist** 131: 412-423.
- Wright, S. J. and H. F. Howe. 1987. Pattern and mortality in Colorado Desert vegetation. **Oecologia** 73: 543-552.
- Hamill, D. N. and S. J. Wright. 1986. Testing the dispersion of juveniles relative to adults: A new analytic method. **Ecology** 67: 952-957.
- Howe, H. F. and S. J. Wright. 1986. Spatial pattern and mortality in the desert mallow (Sphaeralcea ambigua). **National Geographic Research** 2: 491-499.

- Wright, S. J., J. R. Faaborg, and C. J. Campbell. 1985. Birds form tightly structured communities in the Pearl Archipelago, Panama. *in* Neotropical Ornithology. P.A. Buckley, M.S. Foster, E.S. Morton, R.S. Ridgely, and F.G. Buckley (eds.). Ornithological Monographs no. 36.
- Wright, S. J. 1985. How isolation affects rates of turnover of species on islands. **Oikos** 44: 331-340.
- Wright, S. J., R. Kimsey, and C. J. Campbell. 1984. Mortality rates of Anolis lizards on islands: a systematic effect of island area? **American Naturalist** 123: 134-142.
- Wright, S. J. 1983. The distribution of eggs by a bruchid beetle among Scheelea palm seeds and the effect of distance to the parent palm. **Ecology** 64: 1016-1021.
- Wright, S. J. and C. C. Biehl. 1983. Empty sites and the analysis of presence-absence data. **American Naturalist** 122: 833-834.
- Wright, S. J. and S. P. Hubbell. 1983. Stochastic extinction and preserve size: a focal species analysis. **Oikos** 41: 466-476.
- Wright, S. J. and C. C. Biehl. 1982. Island biogeographic distributions: Testing for random, regular and aggregated patterns of species occurrence. **American Naturalist** 119: 345-357.
- Wright, S. J. 1982. Competition, differential mortality, and their effect on the spatial pattern of a desert perennial, Eriogonum inflatum Torr and Frem (Polyganaceae). **Oecologia** 54: 266-269.
- Wright, S. J. 1981. Extinction-mediated competition: The Anolis lizards and insectivorous birds of the West Indies. **American Naturalist** 117:181-192.
- Wright, S. J. 1981. Intra-archipelago vertebrate distributions: The slope of the species-area relation. **American Naturalist** 118: 726-748.
- Wright, S. J. 1980. Density compensation in island avifaunas. **Oecologia** 45: 385-389.
- Wright, S. J. 1979. Competition between insectivorous birds and lizards in central Panama. **American Zoologist** 19: 1145-1156.
- * Order of authorship determined by coin toss.

Book Reviews, newsletters and dissertation (5 total)

- Wright, S. J. 2001. The origin and evolution of tropical forests (book review). **Forest Science** XX: XXX-XXX.

- Wright, S. J. 2000. Scales of space and time in tropical biology. **Tropinet** XX: XX-XX.
- Wright, S. J. and O. Calderón. 1999. El Niño events influence plant reproduction in a wet tropical forest. **Center for Tropical Forest Science Newsletter** Summer 1999: 3.
- Wright, S. J. 1994. La Selva: ecology and natural history of a Neotropical rain forest (book review). **Vida Silvestre Neotropical** 3: 51-52.
- Wright, S. J. 1980. Insular vertebrate ecology: a multi-taxa approach to comparative island studies. PhD Dissertation. University of California at Los Angeles.

Manuscripts in Review (excluded from publication count)

- Wright, S. J., H. C. Muller-Landau, R. Condit and S. P. Hubbell. Annual and spatial variation in seedfall and seedling recruitment in a Neotropical forest. Submitted to **Ecology** (Nov 2003)
- Svenning, J.-C., D. A. Kinner, R. F. Stallard, B. Engelbrecht, and S. J. Wright. Determinism in plant community structure across a tropical forest landscape. Submitted to **Ecology** (Apr 2003)
- King, D. A., S. J. Wright and J. H. Connell. The distribution of maximum tree heights in tropical vs. temperate forests: cause or consequence of tropical diversity? Submitted to **Journal of Ecology** (Nov 2003)
- Svenning, J.-C. and S. J. Wright. Strong seed limitation and limited seedling competition in a tropical forest. Submitted to **Ecology** (Jun 2003)
- Gamon, J. A., K. Kitajima, S. S. Mulkey, L. Serrano and S. J. Wright. Diverse canopy responses to irradiance in a neotropical forest during the dry season: implications for remote estimate of photosynthesis. Submitted to **Plant Cell and Environment** (Aug 2002, under revision)
- Wright, S. J., M. A. Jaramillo, J. Pavon G., R. Condit, S. P. Hubbell and R. B. Foster. Reproductive size thresholds in tropical trees: variation among forests, species, and individuals differing in crown exposure and liana infestation. Submitted to **Oikos** (Oct 2002, under revision)
- Andrews, R. M., A. S. Rand, and S. J. Wright. Long-term population fluctuations of the tropical lizard, *Anolis limifrons*. Submitted to **Journal of Herpetology** (2002, fate ?)
- Kitajima, K., K. Kikuzawa, D. Ackerly, S. S. Mulkey and S. J. Wright. Leaf-age effect on photosynthetic rates as a key parameter in the theory of leaf longevity. Submitted to **Proceedings of the National Academy of Science** (May 2003, under revision)

Sakai, S. and S. J. Wright. Reproductive ecology of 21 coexisting Psychotria species (Rubiaceae) in a tropical forest: when is heterostyly lost? Submitted to **American Journal of Botany** (May 2003)

Presentations (1998-2003; 46 total)

2003 Wright SJ. The ecology of 21 sympatric species of Psychotria (Plant Biology Dept, Univ of Georgia)

Wright SJ. Inter-annual and spatial variation in seed fall and seedling recruitment in a tropical forest (Nicholson School of the Environment, Duke Univ)

Wright SJ. Mast fruiting in a Neotropical forest (Dept of Biology, Univ of Miami)

Wright SJ. The myriad consequences of hunting for vertebrates and plants in tropical forests (Assoc for Tropical Biology and Conservation, Aberdeen Univ, Scotland)

Chen YY, Sun IF, Wright SJ, Hubbell SP, Noor S. Masting events in a lowland dipterocarp forest, Malaysia. (Assoc for Tropical Biology and Conservation, Aberdeen Univ, Scotland)

Muller-Landau HC, Wright SJ. Seed mass and the tradeoff between seed arrival and seed survival in central Panama. (Assoc for Tropical Biology and Conservation, Aberdeen Univ, Scotland)

Persson V, Garwood NC, Wright SJ, Valencia R. Do seed size, life form and dispersal modes affect community level reproductive patterns in an aseasonal Amazonian rainforest? (Assoc for Tropical Biology and Conservation, Aberdeen Univ, Scotland)

Zimmerman JK, Wright SJ, Calderon O, Aponte-Pagan M. Influence of seasonal changes in solar radiation on community flowering and fruiting. (Assoc for Tropical Biology and Conservation, Aberdeen Univ, Scotland)

2002 Wright SJ. Mast fruiting in a Neotropical forest (Plant Biology Dept, Univ of Georgia)

Wright SJ. Mast fruiting in a Neotropical forest (Smithsonian Tropical Research Inst., Panama)

Kitajima K, Wright SJ. Growth-Survival Trade-Offs Tropical Tree Seedlings in Fields and Nurseries (Assoc for Tropical Biology, Panama City, Panama)

Mendoza E, Wright SJ, Dirzo R. Floristic Diversity Along a Gradient of Defaunation in the Insular System of Barro Colorado National Monument (Assoc for Tropical Biology, Panama City, Panama)

Milton K, Giacalone J, Wright SJ. Do Population Fluctuations of Neotropical Frugivores Reflect Fruit Production Estimates? Evidence from Barro Colorado Island (Assoc for Tropical Biology, Panama City, Panama)

Muller-Landau H, Zimmerman J, Wright SJ. Comparing Seed Production and Seed

- Dispersal in Luquillo, Puerto Rico, and Barro Colorado Island, Panama (Assoc for Tropical Biology, Panama City, Panama)
- Muller-Landau H, Wright SJ, Hubbell SP, Condit R, Foster RB. What Life History Trade-Offs Do Tropical Trees Face, and How Do They Contribute to Tree Diversity? (Assoc for Tropical Biology, Panama City, Panama)
- Persson V, Garwood NC, Wright SJ, Valencia R. Seasonality of Reproduction in an "Aseasonal" Amazonian Rainforest in Ecuador (Assoc for Tropical Biology, Panama City, Panama)
- Roubik D, Wright SJ, Calderon O. Long-Term Cycles in Flowering, Fruiting and Pollinator Populations in Central Panama (Assoc for Tropical Biology, Panama City, Panama)
- Wright SJ. The Ecology of 21 Sympatric *Psychotria* (Assoc for Tropical Biology, Panama City, Panama)
- Wright SJ, Muller-Landau HC, Condit R, Hubbell SP. Shade Tolerance, Realized Vital Rates, and Size Distributions of Tropical Trees (Assoc for Tropical Biology, Panama City, Panama)
- Cordero RA, Wright SJ, Kitajima K. Do Pot-Grown Seedlings Grow Like Field-Established Plants? An Experimental Test (Assoc for Tropical Biology, Panama City, Panama)
- Yavitt J, Wright SJ, Harms KE. Soil Nutrient and Fine Root Responses to Fertilization of a Tropical Moist Forest in the Central Lowlands of Panama (Assoc for Tropical Biology, Panama City, Panama)
- 2001 Wright SJ. Density dependence among tropical trees: case studies from Barro Colorado Island, Panama (Assoc for Tropical Biology, Bangalore, India)
- Wright SJ. Temporal variation in seed set and seedling recruitment in a tropical forest. (Biology Dept, James Cook Univ, Cairns, Australia)
- Wright, S. J. 2001. General flowering: experiments to distinguish among possible proximate cues. (Forestry Research Inst of Sarawak, Miri, Malaysia)
- 2000 Muller-Landau HC, Wright SJ, Calderón O, Hernández A, Hubbell SP, Condit R, Foster RB. Recruitment limitation in a seasonally wet tropical forest on Barro Colorado Island, Panama. 3rd International Symposium on Frugivores and Seed Dispersal. Campinas, Brazil.
- Wright SJ. Temporal variation in seed set and seedling recruitment in a tropical forest.

Botany Dept, Univ of Florida, Gainesville.

Korine C, Wright SJ, Harms K, Condit R, Hubbell SP, Foster RB The spectrum of responses to light in tree species of lowland tropical forest. Israel.

Terwilliger VJ, Le Roux-Swarthout DJ, Kitajima K, Mulkey S, Wright SJ. Allocation of stored organic carbon to leaf growth and autotrophic resource use in tropical trees inferred from stable isotopes. Germany.

1999 Wright, S. J. El Niño events promote seed production in a Neotropical forest. XVI International Botanical Congress, St Louis, MO.

Wright, S. J. The canopy biology program in Panama. European Science Foundation Canopy Meeting, Oxford, England.

Wright, S. J. Temporal variation in seed production in a Neotropical forest. James Cook University, Townsville, Australia.

Wright, S. J. Temporal variation in seed production in a Neotropical forest. Aarhus University, Denmark.

Wright, S. J. Plant regeneration in a forest without mammals. Aarhus University, Denmark.

1998 Wright, S. J. Temporal variation in seed production in a Neotropical forest. Second International Canopy Conference. Sarasota, FL.

Wright, S. J. The canopy biology program in Panama. Second International Canopy Conference. Sarasota, FL.

Wright, S. J. Temporal variation in seed production in a Neotropical forest. Dept of Ecology and Evolutionary Biology. Princeton University.

Wright, S. J. El Niño effects on Panamanian forests. The Parque Natural Metropolitano, Panama City, Panama.

Wright, S. J. La regeneración de plantas en el bosque sin mamíferos. IV Congreso Nacional de Ciencias y Tecnología. Panama City, Panama.

Wright, S. J., O. Calderon and B. DeLeon. El Niño climatic variation influences fruit production in a tropical moist forest. ATB, Baltimore, MD.

Valladares, F., S. J. Wright and R. W. Pearcy. Is phenotypic plasticity important in separating functionally redundant species? *Plasticity in Plants*, Israel.

Wright, S. J. The El Nino Southern Oscillation, variable fruit production and famine in a tropical forest. Center for Tropical Forest Science, Smithsonian Institution, Washington.

Muller-Landau, H. C. and S. J. Wright. Interspecific variation in seed shadows and fecundity in a Neotropical Forest. Center for Tropical Forest Science, Smithsonian Institution, Washington.

Harms, K. and S. J. Wright. Pervasive seed dispersal limitation and negative density-dependent seed-to-seedling transitions in a Neotropical tree community. Intecol, Florence, Italy and Center for Tropical Forest Science, Smithsonian Institution, Washington.

Valladares, F., S. J. Wright, E. Lasso, K. Kitajima and R. W. Pearcy. Evolution of plant plastic response to light in tropical forests. Intecol, Florence, Italy.

Wright, S. J. and K. Harms. Chance and the coexistence of ecologically similar plant species in tropical forests. Intecol, Florence, Italy.

Wright, S. J. The El Nino Southern Oscillation, variable fruit production and famine in a tropical forest. CRC-TREM, Cairns, Australia (presentation made by R. Condit).

Additional Smithsonian Service

Current STRI Committees:

Terrestrial Oversight Committee (Chair)
Gamboa Development and Master Plan Committee (Chair)
STRI-OTS Collaboration (Chair)
Soil Science Search Committee

Past STRI Committee Assignments:

Marine Biology Search Committee (2003)
STRI 2000: Steering Committee
STRI 2000: Transition Committee
Search Committee for a Vertebrate Biologist (1998)
Scientific Council (1992-1996)
Search Committee for BCI Coordinator (1992, 1986)
Gamboa Master Plan Committee (1990)
STRI Morale Committee (1990)
Search Committee for Tupper Coordinator (1989)
IBGP Committee (1989)
Environmental Sciences Program Committee (1983-1988)
Computer Committee (1988)
Committee to furnish BCI facilities (1988)
Search Committee for a Plant Ecophysiologicalist (1987)
Education Board (1983-1986)
Search Committee for a Guardabosque (1988, 1986, 1984)
Committee to coordinate BCI visitors (1984)
Search Committee for Computer Specialist (1984)
Search Committee for Supervisor of Guardabosques (1984)
Five-year Review Committee for the Environmental Sciences Program (1983)
Tropical Fellowship Committee (1984-1987)
Niemeyer Trust Advisory Board (1984)

Advisor for Graduate and Postgraduate Scholars (1998-2003)

I have not chaired dissertation committees because the Smithsonian does not grant degrees. I have sponsored 75 pre- and post-doctoral fellows funded by a wide range of sources. Those 75 fellows include 45 three-month Smithsonian fellows, 12 full-year pre-doctoral fellowships, and 18 one- to three-year post-doctoral fellows. Since 1998, I have sponsored the following fellows:

Tete Barigah, CNRS, Montpellier, France
John Barone, Univ of Puerto Rico
Yves Basset, Smithsonian Tropical Research Institute
Yu-yun Chen, Plant Sciences Dept, Univ of Georgia
Roberto Cordero, Smithsonian Tropical Research Institute
Nate Dominy, Univ of Chicago
Charles Elroy, Univ of Guyana, Guyana
Amy Faivre, Cedar Crest, Ohio
Eric Graham, present affiliation unknown
Kyle Harms, LSU
Eloisa Lasso, Univ of Illinois-Champaign
Eduardo Mendoza, UNAM, Mexico
Ricardo Moreno, Smithsonian Tropical Research Institute
Frode Odegaard, NINA-NIKU, Norway
Viveca Persson, Univ of Aberdeen
Shoko Sakai, Tsukuba Univ, Japan
Louis Santiago, Univ of Florida
Miles Silman, Wake Forest Univ
Kirsten Silvius, State Univ of New York, Syracuse
Jens Svenning, Univ of Aarhus, Denmark
Sunshine Van Bael, Univ of Illinois-Champaign