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## Big-leaf mahogany (*Swietenia macrophylla*) in the Brazilian Amazon: long-term studies of population dynamics and regeneration ecology towards sustainable forest management

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### List of Publications

#### I. Scientific & technical publications supported by the ITTO-CITES Programme for Implementing CITES Listings of Tropical Timber Species, Phase I (01 August 2008–30 June 2012)

\* **bold type indicates Project partner**

- 1 Martinez M, Blundell AG, Gullison RE, **Grogan J** (eds.) (2008) Historic range and current status of big-leaf mahogany (*Swietenia macrophylla*) in South America. Report for the Center for Applied Biodiversity Science – Conservation International, Washington, DC, USA. Available at: [http://marine.rutgers.edu/~cfree/wp-content/uploads/Martinez\\_etal\\_2008.pdf](http://marine.rutgers.edu/~cfree/wp-content/uploads/Martinez_etal_2008.pdf).
- 2 Mejía E, Buitrón X, Peña-Claros M, **Grogan J** (2008) Bigleaf mahogany (*Swietenia macrophylla*) in Peru, Bolivia and Brazil. Case Study for the International Expert Workshop on CITES Non-Detriment Findings, 17-22 November 2008, Cancún, Mexico. Available at: <https://cites.unia.es/file.php/1/files/WG1-CS4.pdf>.
- 3 **Schulze M, Grogan J**, Landis RM, Vidal E (2008) How rare is too rare to harvest? Management challenges posed by low-density timber species in the Brazilian Amazon. *Forest Ecology and Management* 256: 1443-1447 (<http://www.treeseearch.fs.fed.us/pubs/35402>).
- 4 **Schulze M, Grogan J**, Uhl C, **Lentini M**, Vidal E (2008) Evaluating ipê (*Tabebuia*, Bignoniaceae) logging in Amazonia: sustainable management or catalyst for forest degradation? *Biological Conservation* 141: 2071-2085 (<http://www.treeseearch.fs.fed.us/pubs/35404>).
- 5 **Grogan J**, Landis RM (2009) Growth history and crown vine coverage are principal factors influencing growth and mortality rates of big-leaf mahogany *Swietenia macrophylla* in Brazil. *Journal of Applied Ecology* 46: 1283-1291 (<http://www.treeseearch.fs.fed.us/pubs/36898>).
- 6 Keefe K, **Schulze MD**, Pinheiro C, **Zweede JC**, Zarin D (2009) Enrichment planting as a silvicultural option in the eastern Amazon: case study of Fazenda Cauaxi. *Forest Ecology and Management* 258: 1950-1959. Abstract available at: <http://www.sciencedirect.com/science/article/pii/S0378112709005155>.
- 7 **Grogan J** (2010) Mogno (*Swietenia macrophylla*, Meliaceae). In: Shanley P, Serra M, Medina G (eds.), *Frutíferas e Plantas Úteis na Vida Amazônica* (2<sup>nd</sup> Edition), pp. 119-126. CIFOR, Bogor, Indonesia.
- 8 **Grogan J**, Blundell AG, Gullison RE, Martinez M, Kometter RF, Landis RM, **Lentini M**, Rice RE (2010) Over-harvesting driven by consumer demand leads to population decline: big-leaf mahogany in South America. *Conservation Letters* 3: 12-20 (<http://www.treeseearch.fs.fed.us/pubs/38432>).
- 9 **Grogan J, Schulze M**, Galvão J (2010) Survival, growth and reproduction by big-leaf mahogany (*Swietenia macrophylla*) in open clearing vs. forested conditions in Brazil. *New Forests* 40: 335-347 (<http://www.treeseearch.fs.fed.us/pubs/37823>).
- 10 **Lentini M, Schulze M**, Dias A, **Zweede J** (2010) A importância da capacitação e treinamento para a expansão do manejo florestal na Amazônia. In: Veríssimo A (ed.), *Fatos Florestais*, pp 88-90. IMAZON, Belém, Pará, Brazil.
- 11 Macpherson A, **Schulze M**, Vidal E, Carter D (2010) A Model for comparing reduced impact logging with conventional logging for an eastern Amazonian forest. *Forest Ecology and Management* 260: 2002-2011. Abstract available at: <http://www.sciencedirect.com/science/article/pii/S0378112710005219>.
- 12 Macpherson A, Carter D, **Lentini M, Schulze M** (2010) Following the rules: Brazilian logging concessions under imperfect enforcement and royalties. *Land Economics* 86: 493-513. Available at:

<http://le.uwpress.org/content/86/3/493.abstract>.

- 13 Norghauer JM, **Grogan J**, Malcolm JR, Felfili JM (2010) Long-distance seed dispersal helps big-leaf mahogany seedlings escape defoliation by a specialist caterpillar. *Oecologia* 162: 405-412. Available at: [http://www.fs.fed.us/global/iitf/pubs/ja\\_iitf\\_2010\\_Norghauer001.pdf](http://www.fs.fed.us/global/iitf/pubs/ja_iitf_2010_Norghauer001.pdf).
  - 14 **Schulze MD**, **Lentini MW**, Macpherson AJ, **Grogan J** (2010) Certification, concessions, and biodiversity in the Brazilian Amazon: can an independent, market-based approach be wed to a large-scale government initiative? *European Tropical Forest Research Network (ETFRN) News* 51: 83-89. Available at: <http://www.etfrn.org/index.php?id=43>.
  - 15 Shanley P, **Schulze M** (2010) Ipê Roxo (*Tabebuia impetiginosa*). In: Shanley P, Serra M, Medina G (eds.), *Frutíferas e Plantas Úteis na Vida Amazônica* (2<sup>nd</sup> Ed.), pp. 99-108. CIFOR, Bogor, Indonesia.
  - 16 Shanley P, **Schulze M** (2010) Jatobá (*Hymenaea courbaril*). In: Shanley P, Serra M, Medina G (eds.), *Frutíferas e Plantas Úteis na Vida Amazônica* (2<sup>nd</sup> Ed.), pp. 109-118. CIFOR, Bogor, Indonesia.
  - 17 **Free C**, Landis RM, **Grogan J** (2011) User Manual for the Big-Leaf Mahogany Growth & Yield Model. Middlebury, VT, USA. 69 pp. Available at: <http://www.swietking.org/model-applet.html>.
  - 18 **Grogan J** (2011) Mahogany, mogno (*Swietenia macrophylla* King). In: Shanley P, Cymerys M, Serra M, Medina G (eds.), *Fruit Trees and Useful Plants in Amazonian Life*, pp. 101-108. Food and Agriculture Organization of the United Nations/Center for International Forestry Research/People and Plants International, Rome, Italy.
  - 19 **Grogan J**, Peña-Claros M, Günter S (2011) Managing natural populations of big-leaf mahogany. In: Günter S, Stimm B, Weber M, Mosandl R (eds.), *Silviculture in the Tropics*, pp. 227-235. Springer Verlag, Berlin, Germany. Available at: [http://biblioteca.catie.ac.cr/comunicacion/Publicaciones/AreasProtegidas/Managing\\_natural\\_populations\\_of\\_big-leaf\\_mahogany.pdf](http://biblioteca.catie.ac.cr/comunicacion/Publicaciones/AreasProtegidas/Managing_natural_populations_of_big-leaf_mahogany.pdf).
  - 20 Kelty MJ, Cámara-Cabrales L, **Grogan J** (2011) Red oak in southern New England and big-leaf mahogany in the Yucatan Peninsula: can mixed-species forests be sustainably managed for single-species production? *Journal of Sustainable Forestry* 30: 637-653. Available at: <http://www.tandfonline.com/doi/abs/10.1080/10549811.2011.567932?journalCode=wjsf20#.V1b7vWTF-Bk>.
  - 21 Norghauer JM, Nock C, **Grogan J** (2011) The importance of tree size and fecundity for seed dispersal of a threatened Neotropical timber tree, big-leaf mahogany (*Swietenia macrophylla*). *PLoS ONE* 6: e17488 (<http://dx.plos.org/10.1371/journal.pone.0017488>).
  - 22 Norghauer JM, **Grogan J** (2012) The intriguing case of *Steniscadia poliophaea* (Noctuidae): potent moth enemy of young mahogany trees in Amazonian forests. In: Cauteruccio L (ed.), *Moths: Types, Ecological Significance and Control Methods*, pp. 39-74. Nova Science Publishers, Inc., Hauppauge, NY, USA.
- II. Scientific & technical publications supported by the ITTO-CITES Programme for Implementing CITES Listings of Tropical Timber Species, Phase II (01 July 2012–present)**
- 23 **Grogan J**, **Schulze M** (2012) The impact of annual and seasonal rainfall patterns on growth and phenology of emergent tree species in southeastern Amazonia, Brazil. *Biotropica* 44: 331-340. Available at: [http://www.fs.fed.us/global/iitf/pubs/ja\\_iitf\\_2012\\_Grogan001.pdf](http://www.fs.fed.us/global/iitf/pubs/ja_iitf_2012_Grogan001.pdf).
  - 24 **Free C**, Landis RM, **Grogan J** (2013) Manual del Usuario para el Modelo de Crecimiento y Rendimiento de la Caoba. Middlebury, VT, USA. 73 pp. Available at: <http://www.swietking.org/spanish-model.html>.
  - 25 **Grogan J**, **Schulze M**, **Lentini M**, **Zweede J**, Landis RM, **Free CM** (2013) Managing big-leaf mahogany in natural forests: Lessons learned from an ITTO-CITES Programme project. *Tropical Forest Update, ITTO Newsletter*. Available at: [http://marine.rutgers.edu/~cfree/wp-content/uploads/Grogan\\_etal\\_2013\\_ITTO.pdf](http://marine.rutgers.edu/~cfree/wp-content/uploads/Grogan_etal_2013_ITTO.pdf).
  - 26 **Grogan J**, Landis RM, **Free C**, **Schulze M**, **Lentini M**, Ashton MS (2014) Big-leaf mahogany *Swietenia macrophylla* population dynamics and implications for sustainable management. *Journal of Applied Ecology* 51: 664-674. Available at: <http://environment.yale.edu/silviculture/files/groganetal.pdf>.
  - 27 **Grogan J**, Loveless M (2013) Flowering phenology and its implications for management of big-leaf mahogany *Swietenia macrophylla* in Brazilian Amazonia. *American Journal of Botany* 100: 2293-2305.

Hudson LN, Newbold T, Contu S et al. (2014) The PREDICTS database: a global database of how local terrestrial biodiversity responds to human impacts. *Ecology and Evolution* DOI: 10.1002/ece3.1303. Abstract available at: <http://onlinelibrary.wiley.com/doi/10.1002/ece3.1303/abstract>.

- 28 **Grogan J, Schulze M**, Pantoja F, Vidal E, **Lentini M**, Valle D (in review) Enrichment planting of big-leaf mahogany in logging gaps in Acre, Brazil. *Forest Ecology and Management*.

### III. Scientific & technical publications in preparation for publication during Phase II of the ITTO-CITES Programme for Implementing CITES Listings of Tropical Timber Species (01 July 2012–present)

- 29 **Free C**, Landis RM, **Grogan J, Schulze M, Lentini M**, Dünisch O Management implications of long-term tree growth & mortality rates: a modeling study of big-leaf mahogany (*Swietenia macrophylla*) in the Brazilian Amazon. *Forest Ecology and Management* 330: 46-54. Available at: [http://data.fs.usda.gov/research/pubs/iitf/ja\\_iitf\\_2014\\_Free001.pdf](http://data.fs.usda.gov/research/pubs/iitf/ja_iitf_2014_Free001.pdf).
- 30 Gribel R, Lemes M, **Grogan J** Long-distance pollen transport in a big-leaf mahogany population in southeastern Brazil: implications for genetic structure and forest management. For *Journal of Tropical Ecology*.
- 31 **Grogan J**, Landis RM, **Free C** Mahogany (*Swietenia macrophylla*) seedling growth response to micro-scale variation in soil nutrient status in southeastern Amazonia, Brazil. For *Forest Ecology and Management*.
- 32 **Grogan J**, Landis RM, **Free C** Soil transitions across gentle topography in southeastern Amazonia, Brazil shape seedling survival and growth patterns by big-leaf mahogany (*Swietenia macrophylla*). For *Forest Ecology and Management*.
- 33 **Grogan J**, Loveless M, **Free C**, Landis RM, **Schulze M** Management implications of fruiting behavior by big-leaf mahogany *Swietenia macrophylla* in southeastern Amazonia, Brazil. For *American Journal of Botany*.
- 34 **Grogan J**, McKenna J, **Schulze M, Free C**, Galvão J, Ashton MS Physiographic associations of big-leaf mahogany (*Swietenia macrophylla*) in southeastern Amazonia, Brazil. For *Journal of Tropical Ecology*.
- 35 **Grogan J, Schulze M** Composition, structure and dynamics of transitional seasonally dry evergreen forests of southeast Pará, Brazil. For *Biotropica*.
- 36 Landis RM, **Free C, Grogan J, Schulze M, Lentini M** Implications of population diameter distributions for long-term timber production from natural forests: a case study of big-leaf mahogany (*Swietenia macrophylla*) in the Brazilian Amazon. For *Forest Ecology and Management*.
- 37 Norghauer JM, **Free C**, Malcolm JR, Thomas SC, **Grogan J** Predation and herbivory drive distance- and density-dependent seedling recruitment of a Neotropical emergent tree: the evidence from spatial models. For *Ecology Letters*.
- 38 Norghauer JM, **Grogan J** Implications of fruit and seed size for dispersal and landscape distribution of big-leaf mahogany in southeast Amazonia. For *Journal of Tropical Ecology*.
- 39 **Schulze M, Grogan J** Population dynamics of jatobá *Hymenaea courbaril* (Caesalpinioideae) in southeastern Amazonia, Brazil. For *Forest Ecology and Management*.
- 40 **Schulze M, Grogan J**, McKenna J, **Free C, Lentini M** Physiographic associations and population dynamics of 30 secondary timber species in southeast Amazonia, Brazil. For *Journal of Tropical Ecology*.