

Agua Salud Bibliography

Updated December 15, 2020

This is a list of publications that are attributed to research done on the Agua Salud River Panama Canal Watershed Project by the Smithsonian Tropical Research Institute. The publications are grouped by year and sorted alphabetically by first author, with known Smithsonian Tropical Research Institute researchers marked in bold. The data are generated from [Smithsonian Research Online](#), provided by the Smithsonian Libraries and Archives. Reports are generated on a quarterly basis and may not include the most recent publications.

2019

- Adams, Benjamin J., **Gora, Evan M., Breugel, Michiel van, Estrada-Villegas, Sergio, Schnitzer, Stefan A., Hall, Jefferson S., and Yanoviak, Stephen P.** 2019. "[Do lianas shape ant communities in an early successional tropical forest?](#)" *Biotropica* 1–9. <https://doi.org/10.1111/btp.12709>
- Fernandez Barrancos, Estefania Pilar, Reid, J. L., and **Hall, Jefferson S.** 2019. "[Lack of Araceae in Young Forests Highlights the Importance of Mature Forest Conservation.](#)" *Tropical Conservation Science* 12:1–5. <https://doi.org/10.1177/1940082919849504>
- Kerdraon, Deirdre, Drewer, Julia, **Castro, Biancolini, Wallwork, Abby, Hall, Jefferson, and Sayer, Emma.** 2019. "[Litter Traits of Native and Non-Native Tropical Trees Influence Soil Carbon Dynamics in Timber Plantations in Panama.](#)" *Forests* 10 (3):<https://doi.org/10.3390/f10030209>
- Levy-Varon, Jennifer, **Batterman, Sarah A., Medvigy, David, Xu, Xiangtao, Hall, Jefferson S., van Breugel, Michiel,** and Hedin, Lars O. 2019. "[Tropical carbon sink accelerated by symbiotic dinitrogen fixation.](#)" *Nature Communications* 10:Article 5637. <https://doi.org/10.1038/s41467-019-13656-7>
- Mayoral, Carolina, van Breugel, Michiel, Turner, Benjamin L., Asner, Gregory P., Vaughn, Nicholas R., and Hall, Jefferson S.** 2019. "[Effect of microsite quality and species composition on tree growth: A semi-empirical modeling approach.](#)" *Forest Ecology and Management* 432:534–545. <https://doi.org/10.1016/j.foreco.2018.09.047>
- Sinacore, Katherine,** Asbjornsen, Heidi, Hernandez-Santana, Virginia, and **Hall, Jefferson S.** 2019. "[Drought Differentially Affects Growth, Transpiration, and Water Use Efficiency of Mixed and Monospecific Planted Forests.](#)" *Forests* 10 (2):1–19. <https://doi.org/10.3390/f10020153>
- Sinacore, Katherine,** Breton, Connor, Asbjornsen, Heidi, Hernandez-Santana, Virginia, and **Hall, Jefferson S.** 2019. "[Drought effects on *Tectona grandis* water regulation are mediated by](#)

[thinning, but the effects of thinning are temporary.](#)" *Frontiers in Forests and Global Change* 2:82. <https://doi.org/10.3389/ffgc.2019.00082>

van Breugel, Michiel, Craven, Dylan, Lai, Hao Ran, Baillon, Mario, **Turner, Benjamin L.**, and **Hall, Jefferson S.** 2019. "[Soil nutrients and dispersal limitation shape compositional variation in secondary tropical forests across multiple scales.](#)" *Journal of Ecology* 107 (2):566–581. <https://doi.org/10.1111/1365-2745.13126>

2018

Batterman, Sarah A., **Hall, Jefferson S.**, **Turner, Benjamin L.**, Hedin, Lars O., Walter, J. K., Sheldon, Pete, and **van Breugel, Michiel.** 2018. "[Phosphatase activity and nitrogen fixation reflect species differences, not nutrient trading or nutrient balance, across tropical rainforest trees.](#)" *Ecology Letters* 21 (10):1486–1495. <https://doi.org/10.1111/ele.13129>

Bretfeld, Mario, Ewers, Brent E., and **Hall, Jefferson S.** 2018. "Plant water use responses along secondary forest succession during the 2015-2016 El Niño drought in Panama." *New Phytologist* 219 (3):885–899. <https://doi.org/10.1111/nph.15071>

Cheng, Yanyan, **Ogden, Fred L.**, Zhu, Jianting, and **Bretfeld, Mario.** 2018. "[Land Use-Dependent Preferential Flow Paths Affect Hydrological Response of Steep Tropical Lowland Catchments With Saprolitic Soils.](#)" *Water Resources Research* 54 (8):5551–5566. <https://doi.org/10.1029/2017WR021875>

Lai, Hao Ran, **Hall, Jefferson S.**, **Batterman, Sarah A.**, **Turner, Benjamin L.**, and **van Breugel, Michiel.** 2018. "[Nitrogen fixer abundance has no effect on biomass recovery during tropical secondary forest succession.](#)" *Journal of Ecology* 106 (4):1415–1427. <https://doi.org/10.1111/1365-2745.12979>

Roels, Steven M., Porter, Jade L., and Lindell, Catherine A. 2018. "[Predation pressure by birds and arthropods on herbivorous insects affected by tropical forest restoration strategy.](#)" *Restoration Ecology* 26 (6):1203–1211. <https://doi.org/10.1111/rec.12693>

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Miller, Ethan, **Dandois, Jonathan P.**, **Detto, Matteo**, and **Hall, Jefferson S.** 2017. "Drones as a Tool for Monoculture Plantation Assessment in the Steepland Tropics." *Forests* 8 (5):168. <https://doi.org/10.3390/f8050168>

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Barry, Kathryn E., **Schnitzer, Stefan A.**, **van Breugel, Michiel**, and **Hall, Jefferson S.** 2015. "[Rapid Liana Colonization along a Secondary Forest Chronosequence.](#)" *Biotropica* 47 (6):672–680. <https://doi.org/10.1111/btp.12259>

- Craven, Dylan, **Hall, Jefferson S.**, Berlyn, Graeme P., Ashton, Mark S., and **van Breugel, Michiel**. 2015. "[Changing gears during succession: shifting functional strategies in young tropical secondary forests.](https://doi.org/10.1007/s00442-015-3339-x)" *Oecologia* 179 (1):293–305. <https://doi.org/10.1007/s00442-015-3339-x>
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- Hall, Jefferson S.**, Kirn, Vanessa, and **Yanguas-Fernandez, Estrella**. , eds. 2015. *La gestion de las cuencas hidrograficas para asegurar los servicios ecosistemicos en las laderas del Neotropico*. Balboa, Panama: Instituto Smithsonian de Investigaciones Tropicales.
- Hall, Jefferson S.**, **Lebrija-Trejos, Edwin**, Asbjornsen, Heidi, Aguirre, Nikolay, **van Breugel, Michiel**, Carter Berry, Z., and Martinez-Ramos, Miguel. 2015. "Comprender el capital natural, parte B: Patrones y procesos de los ecosistemas." in *La gestion de las cuencas hidrograficas para asegurar los servicios ecosistemicos en las laderas del Neotropico.*, edited by **Hall, Jefferson S.**, Kirn, Vanessa, and **Yanguas-Fernandez, Estrella.**, 38–52. Balboa, Panama: Instituto Smithsonian de Investigaciones Tropicales.
- Meyer, Ninon, **Esser, Helen J.**, **Moreno, Ricardo**, van Langevelde, Frank, Liefting, Yorick, Oller, David Ros, Vogels, Chantal B. F., Carver, Andrew D., Nielsen, Clayton K., and **Jansen, Patrick A.** 2015. "[An assessment of the terrestrial mammal communities in forests of Central Panama, using camera-trap surveys.](https://doi.org/10.1016/j.jnc.2015.04.003)" *Journal for Nature Conservation* 26:28–35. <https://doi.org/10.1016/j.jnc.2015.04.003>
- Moss, Daniel, **Hall, Jefferson S.**, Murgueitio, Enrique, Calle, Zoraida, Raudsepp-Hearne, Ciara, Balvanera, Patricia, and Raes, Leander. 2015. "Towards integrated watershed management in the stepland neotropics." in *Managing watersheds for ecosystem services in the stepland neotropics*, edited by **Hall, Jefferson S.**, Kirn, Vanessa, and **Yanguas-Fernandez, Estrella.**, 84–90. Balboa, Panama: Smithsonian Tropical Research Institute.
- Moss, Daniel, **Hall, Jefferson S.**, Murgueitio, Enrique, Calle, Zoraida, Raudsepp-Hearne, Ciara, Balvanera, Patricia, and Raes, Leander. 2015. "Hacia la gestion integrada de las cuencas hidrograficas en los terrenos de ladera del neotropico." in *La gestion de las cuencas hidrograficas para asegurar los servicios ecosistemicos en las laderas del Neotropico*, edited by **Hall, Jefferson S.**, Kirn, Vanessa, and **Yanguas-Fernandez, Estrella.**, 95–102. Balboa, Panama: Instituto Smithsonian de Investigaciones Tropicales.
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traits are weak predictors of juvenile tree growth, and we do not know why." *Journal of Ecology* 103 (4):978–989. <https://doi.org/10.1111/1365-2745.12401>

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Hassler, S. K., Lark, R. M., Zimmermann, B., and **Elsenbeer, H.** 2014. "Which sampling design to monitor saturated hydraulic conductivity?." *European Journal of Soil Science* 65 (6):792–802. <https://doi.org/10.1111/ejss.12174>

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Batterman, Sarah A., Hedin, Lars O., **van Breugel, Michiel**, Ransjin, Johannes, Craven, Dylan J., and **Hall, Jefferson S.** 2013. "Key role of symbiotic dinitrogen fixation in tropical forest secondary succession." *Nature* 502:224–227. <https://doi.org/10.1038/nature12525>

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