

# Publications

## 2022

Y Zhao, X Chen, JS Kim, M Williams (2022) *Effects of temperature and precipitation on litterfall phenology in four evergreen broad-leaved forests of southern China*. **Biotropica** 54 (3), 739-753 2022

A Hastie, EN Honorio Coronado, J Reyna, ETA Mitchard, CM Åkesson, ... (2022) Risks to carbon storage from land-use change revealed by peat thickness maps of Peru. **Nature Geoscience**, 1-6 2022

Y Yang, AA Bloom, S Ma, P Levine, A Norton, NC Parazoo, JT Reager, ... (2022) CARDAMOM-FluxVal version 1.0: a FLUXNET-based validation system for CARDAMOM carbon and water flux estimates. **Geoscientific Model Development** 15 (4), 1789-1802 2022

R Ge, H He, L Zhang, X Ren, M Williams, G Yu, T Luke Smallman, T Zhou, ...(2022) *Climate sensitivities of carbon turnover times in soil and vegetation: understanding their effects on forest carbon sequestration*. **Journal of Geophysical Research: Biogeosciences** 127 (3), e2020JG005880 2022

JS Kim, JS Kug, S Jeong, JH Yoon, N Zeng, J Hong, JH Jeong, Y Zhao, ... *Arctic warming-induced cold damage to East Asian terrestrial ecosystems*. **Communications Earth & Environment** 3 (1), 1-8 2022

Caen, A., T. L. Smallman, A. A. de Castro, E. Robertson, C. von Randow, M. Cardoso and M. Williams (2022) *Evaluating two land surface models for Brazil using a full carbon cycle benchmark with uncertainties*. **Climate Resilience and Sustainability**: 1 (1), e10 1 2022

S Stettz, N Parazoo, AA Bloom, P Blanken, D Bowling, S Burns,

C Bacour, ... (2022) Resolving temperature limitation on spring productivity in an evergreen conifer forest using a model–data fusion framework. **Biogeosciences** 19 (2), 541-558 2022

FTL Smallman, DT Milodowski, M Williams (2022) From ecosystem observation to environmental decision-making: model-data fusion as an operational tool. **Frontiers in Forests and Global Change**

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Wheeler, C.E, E T A Mitchard, H E Nalasco Reyes, G I Harrera, J I M Rubio, H Carstairs, M Williams (2021) *A New Field Protocol for Monitoring Forest Degradation*. **Frontiers in Forests and Global Change** 4:655280. doi: 10.3389/ffgc.2021.655280.

P Levy, R Clement, N Cowan, B Keane, V Myrgeiotis, M van Oijen, ...& M Williams (2021) *Challenges in scaling up greenhouse gas fluxes: experience from the UK Greenhouse Gas Emissions and Feedbacks Programme*. **Journal of Geophysical Research: Biogeosciences**, e2021JG006743 2021

TL Smallman, DT Milodowski, ES Neto, G Koren, J Ometto, M Williams (2021). *Parameter uncertainty dominates C-cycle forecast errors over most of Brazil for the 21st century*. **Earth System Dynamics** 12 (4), 1191-1237

Kropp, H., M. M. Loranty, S... M. Williams..., K. Langley, M. Lund (2021) *Shallow soils are warmer under trees and tall shrubs across Arctic and Boreal ecosystems*, **Environmental Research Letters** 16: 015001.

R. Baatz, H.J. Hendricks Franssen, E. Euskirchen, D. Sihi, M. Dietze, S. Ciavatta, K. Fennel, H. Beck, G. De Lannoy, V.N.R. Pauwels, A. Raiho, C. Montzka, M. Williams, U. Mishra, C. Poppe, S. Zacharias, A. Lausch, L. Samaniego, K. Van Looy, H. Bogen, M. Adamescu, M. Mirtl, A. Fox, K. Goergen, B. S. Naz, Y. Zeng, H. Vereecken(in press) *Reanalysis in Earth System*

*Science: Towards Terrestrial Ecosystem Reanalysis. Reviews in Geophysics*, 59: e2020RG000715.

Godlee, J., C.M. Ryan ..many others.., M. Williams, M., and K. Dexter (2021). *Structural diversity and tree density drives variation in the biodiversity-ecosystem function relationship of woodlands and savannas. New Phytologist*, 232: 579-594.

Myrgiotis, V.; P. Harris; A. Revill; H. Sint; M Williams (2021), *Inferring management and predicting sub-field scale C dynamics in UK grasslands using biogeochemical modelling and satellite-derived leaf area data, Agricultural and Forest Meteorology*.

Duncanson, L., et al.. (2021). *Aboveground Woody Biomass Product Validation Good Practices Protocol*. Version 1.0. In L. Duncanson, M. Disney, J. Armston, J. Nickeson, D. Minor, and F. Camacho (Eds.), *Good Practices for Satellite Derived Land Product Validation*, (p. 236): **Land Product Validation Subgroup (WGCV/CEOS)**, doi:10.5067/doc/ceoswgcv/lpv/agb.001

Famiglietti, C.A, T. L. Smallman, A. Levine, S. Flack-Prain, G. R. Quetin, V. Meyer, N. Parazoo, S. G. Stettz, Y. Yang, D. Bonal, A. A. Bloom, M. Williams, and A. G. Konings (2021). *Optimal model complexity for terrestrial carbon cycle prediction. Biogeosciences*.

The SEOSAW partnership (2021). *A network to understand the changing socio-ecology of the southern African woodlands (SEOSAW): Challenges, benefits, and methods. Plants, People, Planet*. <https://doi.org/10.1002/ppp3.10168>

He, H., Ge, R., Ren, X., Zhang, L., Chang, Q., Xu, Q., Zhou, G., Xie, Z., Wang, S., Wang, H., Zhang, Q., Wang, A., Fan, Z., Zhang, Y., Shen, W., Yin, H., Lin, L., Williams, M., Yu, G., 2021. *Reference carbon cycle dataset for typical Chinese forests via colocated observations and data assimilation*.

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Florence, A., Andrew Revill, Stephen Hoad, Robert Rees, Mathew Williams (2021) *The Effect of Antecedence on Empirical Model Forecasts of Crop Yield from Observations of Canopy Properties*. **Agriculture** 11: 258

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ForestPlots.net [548 contributors] (in press) *Taking the Pulse of Earth's Tropical Forests using Networks of Highly Distributed Plots*. **Biological Conservation**.

Worden, J., S. Saatchi, M. Keller, A.A Bloom, R. Fu, S. Worden, J. Liu, N. Parazoo, J.B. Fisher, H. Worden, Y. Yin, K. Bowman, P. Gentine, A.G. Konings, G.R. Quetin, M. Williams, J.T. Reager, A. Barkhordarian, K. Fahy, M. Shi & D Schimel (in press) *Satellite Observations of the Tropical Terrestrial Carbon Balance and Interactions with the Water Cycle During the 21st Century*. **Reviews of Geophysics**.

Milodowski, D.T, D.A Coomes, T. Swinfield, T. Jucker, T. Riutta, Y. Malhi, M. Svátek, J. Kvasnica, D.F.R.P. Burslem, R.M. Ewers, Y.A. Teh, and M. Williams (in press) *The impact of logging on vertical canopy structure across a gradient of tropical forest degradation intensity in Borneo*. **Journal of Applied Ecology**.

Flack-Prain, S., L. Shi, P. Zhu, H.R. da Rocha, O. Cabral, S. Hu, and M. Williams (2021) *The Impact of Climate Change and Climate Extremes on Sugarcane Production*. **Global Change Biology Bioenergy** 13(3): 408-424

Flack-Prain, S., P. Meir, Y. Malhi, T.L. Smallman, and M. Williams (2021) *Does Economic Optimisation Explain LAI and*

*Leaf Trait Distributions Across an Amazon Soil Moisture Gradient?* **Global Change Biology** 27(3): 587-605.

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A. A. Bloom, K. W. Bowman, J. Liu, A.G. Konings, J. R. Worden, N. C. Parazoo, V. Meyer, J. T. Reager, H.M. Worden, Z. Jiang, G.R. Quetin, T.L. Smallman, J. Exbrayat, Y. Yin, S. S. Saatchi, M. Williams, and D.S. Schimel (2020). *Lagged effects regulate the inter-annual variability of the tropical carbon balance.* **Biogeosciences** 17: 6393–6422.

Kropp et al., (2020). Shallow soils are warmer under trees and tall shrubs across Arctic and Boreal ecosystems. **Environmental Research Letters**, in press.

Williams, M., Y. Zhang, C. Estop-Aragonés, J. Fisher, G. Xenakis, D. Charman, I. Hartley, J. Murton, and G. Phoenix (2020). *Boreal permafrost thaw amplified by fire disturbance and precipitation increases.* **Environmental Research Letters** 15: 114050.

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Myrgiotis, V., M. Williams, R. M. Rees, and C. F. E. Topp (2019). *Estimating the soil N<sub>2</sub>O emission intensity of croplands in northwest Europe*. **Biogeosciences** 16, 1641-1655.

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