

Precipitation partitioning by vegetation: A global synthesis

John Van Stan, Georgia Southern University, Savannah GA, USA

Ethan Gutmann , National Center for Atmospheric Research, Boulder CO, USA

Jan Friesen, Helmholtz Centre for Environmental Research, Leipzig, Germany



Thanks for checking out this presentation! Due to the online format of this year's meeting, we have chosen to upload short video abstracts to YouTube for the book and each chapter. Total run time is ~20 minutes (aiming for the length of a typical oral talk); thus, these video abstracts cannot cover all the information within the chapters themselves. It is our intent and hope that these short video abstracts become fodder to fuel discussion by the broader community. Frankly, these videos are sometimes silly ☺

Briefly, we aim to discuss topics and questions raised by the recent book published under this presentation's title. The book presents research on precipitation partitioning processes in vegetated ecosystems, putting them into a global context. It describes the processes by which meteoric water comes into contact with the vegetation's canopy, typically the first surface contact of precipitation on land. It also discusses how precipitation partitioning by vegetation impacts the amount, patterning, and chemistry of water reaching the surface, as well as the amount and timing of evaporative return to the atmosphere. Although this process has been extensively studied, this is the first review of the global literature on the partitioning of precipitation by forests, shrubs, crops, grasslands and other less-studied plant types.

Below are links to individual sections of the presentation:

Chapter	Title (hyperlinked)
00	Introduction to the book
01	Historical Overview of the First Process in the Terrestrial Hydrologic Pathway
02	Storage and Routing of Precipitation Through Canopies
03	Evaporative Processes on Vegetation: An Inside Look
04	A Global Synthesis of Throughfall and Stemflow Hydrometeorology
05	Things Seen and Unseen in Throughfall and Stemflow
06	Spatial Variability and Temporal Stability of Local Net Precipitation Patterns
07	Global Modeling of Precipitation Partitioning by Vegetation and Their Applications
08	Throughfall and Stemflow: The Crowning Headwaters of the Aquatic Carbon Cycle
09	Interactions of Epiphytes with Precipitation Partitioning
10	Relevance of Precipitation Partitioning to the Tree Water and Nutrient Balance
11	Role of Precipitation Partitioning in Litter Biogeochemistry
12	A Review of the Effects of Throughfall and Stemflow on Soil Properties and Soil Erosion
13	Flow Pathways of Throughfall and Stemflow Through the Subsurface
14	Hydrologic Highways Between Microbial Communities of the Plant Microbiome?
15	Valuing Urban Tree Impacts on Precipitation Partitioning
16	Key Questions on the Evaporation and Transport of Intercepted Precipitation

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One can purchase the book or chapters here: <https://www.springer.com/gp/book/9783030297015>

Contributors by chapter:

Chapter 1: John T. Van Stan II and Jan Friesen

Chapter 2: Anna Klamerus-Iwan, Timothy E. Link, Richard F. Keim, and John T. Van Stan II

Chapter 3: Miriam Coenders-Gerrits, Bart Schilperoort, and César Jiménez-Rodríguez

Chapter 4: S.M. Moein Sadeghi, D. Alex Gordon, and John T. Van Stan II

Chapter 5: Alexandra G. Ponette-González, John T. Van Stan II, and Donát Magyar

Chapter 6: John T. Van Stan II, Anke Kleidon-Hildebrandt, Jan Friesen, Johanna C. Metzger, and Sandra A. Yankine

Chapter 7: Ethan D. Gutmann

Chapter 8: Aron Stubbins, François Guillemette, and John T. Van Stan II

Chapter 9: Glenda Mendieta-Leiva, Philipp Porada, and Maaïke Y. Bader

Chapter 10: Doug P. Aubrey

Chapter 11: Robert G. Qualls

Chapter 12: David Dunkerley

Chapter 13: Jan Friesen

Chapter 14: John T. Van Stan II, Cindy E. Morris, Kyaw Aung, Yakov Kuzyakov, Donát Magyar, Eria A. Rebollar, Mitja Remus-Emsermann, Stéphane Uroz, and Philippe Vandenkoornhuyse

Chapter 15: David J. Nowak, Robert Coville, Ted Endreny, Reza Abdi, and John T. Van Stan II

Chapter 16: Scott T. Allen, Doug P. Aubrey, Maaïke Y. Bader, Miriam Coenders-Gerrits, Jan Friesen, François Guillemette, Ethan D. Gutmann, César Jiménez-Rodríguez, Richard F. Keim, Anna Klamerus-Iwan, Glenda Mendieta-Leiva, Philipp Porada, Robert G. Qualls, Bart Schilperoort, Aron Stubbins, John T. Van Stan II