

Tomasz B. Falkowski

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Cornell University
Ithaca, NY 14850

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EDUCATION

- 2014-2018 Ph.D. of Environmental and Forest Biology
State University of New York College of Environmental Science and
Forestry, Syracuse, NY
Thesis Title: Assessing the Socioecological Restoration Potential of
Successional Lacandon Maya Agroforestry in the Lacandon Rainforest of
Chiapas, Mexico
- 2012-2014 M.S. of Environmental Resources Engineering
State University of New York College of Environmental Science and
Forestry, Syracuse, NY
Thesis Title: An Emergy Evaluation of Labor Transformity Incorporating
Traditional Ecological Knowledge of Agroforestry in Lacanja Chansayab,
Chiapas, Mexico
- 2008-2012 B.S. of Bioengineering (Summa cum laude and with departmental
distinction)
Environmental Studies Minor
Scholars Program Minor
Binghamton University, Binghamton, NY

PROFESSIONAL APPOINTMENTS AND EMPLOYMENT

- 2019-Present Postdoctoral Fellow
David R. Atkinson Center for a Sustainable Future
Cornell University, Ithaca, NY
- 2018-2019 Postdoctoral Associate
School of Integrative Plant Science/College of Agriculture and Life
Sciences
Cornell University, Ithaca, NY

PUBLICATIONS

Books and Chapters

Falkowski, Tomasz B., Drinkwater, L. (2019). *Problem-solving and innovation on the farm: A how-to manual*. Ithaca, NY: Sustainable Agriculture Research and Education.

Falkowski, Tomasz B., Diemont, S.A.W. (In press). *Cultural and Social Services of Agroforestry*, in: *Ecosystem Services of Agroforestry*. Springer.

Peer-reviewed Journal Articles

Falkowski, Tomasz B., Vazquez Pérez, J.R., Diemont, S.A.W., Chankin, A., Rangel Salazar, J.L.,

- Cohen, JB, Campos, A. (In press). "Assessing avian diversity and community composition along a successional gradient in traditional Lacandon Maya agroforests." *Biotropica*.
- Falkowski, Tomasz B.**, Diemont, S.A.W., Chankin, A. (2019). "Successional changes in vegetation and leaf litter structure in Lacandon Maya agroforests." *Agroecology and Sustainable Food Systems*.
- Falkowski, Tomasz B.**, Diemont, S.A.W., Chankin, A., Pedian, R.W. (2019). "Quantifying provisioning ecosystem services provided by traditional Lacandon Maya *milpas*¹." *Food Security*.
- Falkowski, Tomasz B.**, Diemont, S.A.W., Chankin, A., Douterlugne, D. (2018). "Effects of five Lacandon Maya agroforestry trees on soil nematode trophic group composition." *Agroforestry Systems*.
- Falkowski, Tomasz B.**, Diemont, S.A.W., Chankin, A., Douterlugne, D. (2016). "Traditional ecological knowledge and forest restoration: Soil quality beneath Lacandon Maya agroforestry system trees." *Ecological Engineering*, 92: 210-217.
- Falkowski, Tomasz B.**, Martinez-Bautista, Isaias, Diemont, S.A,W. (2015). "How valuable could traditional ecological knowledge (TEK) be for a resource-limited future?: An emergy evaluation of TEK learning in two Mexican villages." *Ecological Modeling*, 300: 40-49. ·
- Garcia Polo, Jorge Jose, **Falkowski, T.B.**, Law, E., Mokashi, S.A., Fix, A. (In review). "Restoring Ecosystem Services and Eating Them Too: Integrating agroecology and ecosystem restoration." *Restoration Ecology*.
- Falkowski, Tomasz B.** (In review). "Best practices for transforming socioeconomic drivers of ecological degradation through restoration." *Restoration Ecology*.

Popular Press

- Falkowski, Tomasz B.**, Drinkwater, L. "Learn to Innovate and Solve Problems on the Farm." *Small Farms Quarterly*. 2020.
- Falkowski, Tomasz B.** "Abandon All Hope: Moving toward an existentialist environmentalism." *Resilience.org*. 5 Jul. 2019. Web.
- Falkowski, Tomasz B.** "A Hard Rain's a Gonna Fall: Climate Change, Migration, and the Militarization of the US-Mexico Border." *Committee on U.S.-Latin American Relations Newsletter*. 2019.
- Falkowski, Tomasz B.** "A look at life and death in the Amazon — and how we can find a new way forward." *Planet Forward*. 22 Aug. 2017. Web.
- Falkowski, Tomasz B.** "Cultivating a New Nature: Ecological Agriculture and Traditional Ecological Knowledge." *Planet Forward*. 27 Feb. 2017. Web.
- Falkowski, Tomasz B.** "The Language of Birds." *Planet Forward*. 24 Feb. 2017. Web.
- Falkowski, Tomasz B.** "Learning to think like a River: Stories of the Amazon." *Planet Forward*. 10 July 2017. Web.
- Falkowski, Tomasz B.** "The Phoenix: How Fire and Disturbance Can Revitalize Ecosystems." *Planet Forward*. 23 Feb. 2017. Web.

¹ One of ten articles selected by Food Security Editor in Chief's "Looking Back at Food Security in 2019."

AWARDS AND HONORS

- 2018 Robert L. Burgess Outstanding Doctoral Scholar Award
 2017 Planet Forward StoryFest competition winner
 2014 American Ecological Engineering Society Meeting student design competition winner
 2014 State University of New York College of Environmental Science and Forestry Graduate Student Association Excellence in Student Teaching Award nominee

GRANTS AND FELLOWSHIPS

- 2019 Atkinson Postdoctoral Fellowship in Sustainability (\$150,000)
 2017 Bristol-Myers-Squibb Sustainability Fellowship (\$15,000)
 2017 Garden Club of America Restoration Grant (\$8,000)
 2017 State University of New York College of Environmental Science and Forestry Office of Graduate Studies Travel Grant (\$250)
 2015 National Geographic Society Young Explorer Grant #71235 (\$4,999)
 2015 Tropical Social Forestry Fund Grant (\$2,000)

CONFERENCE ACTIVITY/PARTICIPATION

- Falkowski, Tomasz B.** (2020) "Revolutionary Restoration in the Age of Global Capital: Transforming socioeconomic drivers of ecological degradation through restoration" *International Society for Tropical Foresters*. New Haven, CT.
- Falkowski, Tomasz B.** (2019). "An Agricultural Response to Mitigating Greenhouse Gas Emissions" *World on your Plate*. Amherst, NY.
- Falkowski, Tomasz B.** (2018). "Restoring More than Trees: How traditional Lacandon Maya agroforestry can facilitate biocultural restoration." *International Society for Tropical Foresters*. New Haven, CT.
- Falkowski, Tomasz B.,** Diemont, S.A.W., Chankin, A., Pedian, R. (2017). "A comprehensive assessment of provisioning ecosystem services in Hach Winik *milpas*." *Association for Tropical Biodiversity and Conservation*. Merida, Yucatán, Mexico.
- Falkowski, Tomasz B.,** Diemont, S.A.W., Chankin, A., Salazar, J.L.R., Vazquez Perez, J.R., Campos, A., Pedian, R. (2017). "Ecological Engineering for the Birds: Changes in avian diversity and community composition along a successional gradient in Hach Winik agroforests." *Association for Tropical Biodiversity and Conservation*. Merida, Yucatán, Mexico.
- Falkowski, Tomasz B.,** Diemont, Stewart A.W., Chankin, A. (2016). "Successional changes in ecosystem structure and processes in Lacandon Maya agroforests." *Spotlight on Student Research*. SUNY ESF, Syracuse, NY
- Falkowski, Tomasz B.,** Diemont, Stewart A.W. (2014). "Traditional ecological knowledge and Forest restoration: Soil quality beneath Lacandon Maya agroforestry system trees." *Designing Resilience in a Changing World: 14th Annual American Ecological Engineering Society Meeting*. Clemson University, Clemson, SC.
- Falkowski, Tomasz B.,** Martinez-Bautista, Isaias, Diemont, SAW. (2013). "Re-evaluating

traditional ecological knowledge inputs to indigenous farming systems using emergy.” (2013) *Ecosystems for Water and Energy: 13th Annual American Ecological Engineering Society Meeting*. Michigan State University, East Lansing, MI.

Washington-Allen, Robert A., Davis, K., **Falkowski, T.B.**, Delgado, A., Bagget, J., Moore, G., Tjoelker, M., Gonzalez, E., Houser, C. (2011). “NSF Research Experience for Undergraduates: 3-D Characterization and Comparison of Vegetation Structure in a Tropical Premontane Wet Forest.” *American Geophysical Union (AGU) 2011 Fall Meeting*. San Francisco, CA. http://costaricareu.tamu.edu/files/agu_2011.pdf.

GUEST LECTURES AND SEMINARS

Invited

Falkowski, Tomasz B. “The effects of fire management on ecosystem services and geochemical cycling in traditional Maya swidden agroecosystems.” Sustainability Perspectives Series Lecture. Wells College, Aurora, NY. 10 February 2020.

Falkowski, Tomasz B. “Translating Traditional Ecological Knowledge into a Western Scientific Epistemology”. Human Dimensions of Ecosystem Management (ENR 8400). The Ohio State University, Columbus, OH. 18 Nov. 2019.

Falkowski, Tomasz B. “Land Use Change and Socioecological Restoration.” Morrisville State College. Morrisville, NY. 13 April 2018.

Falkowski, Tomasz B. “Cultural Ecosystem Services in Agroforests.” Skidmore College. Saratoga Springs, NY. 21 March 2018.

Falkowski, Tomasz B. “Cultural Ecosystem Services in Agroforests.” Sterling College. Craftsbury Common, VT. 22 February 2018.

Falkowski, Tomasz B. “Applying Traditional Ecological Knowledge for Eco-cultural Restoration in Chiapas, Mexico.” Wells College Science Colloquium. Aurora, NY. 6 February 2015.

Falkowski, Tomasz B. “La Diversidad de Pajaros en Diferentes Sistemas de Manejo de la Tierra en la Región de Montes Azules en Chiapas, México.” Seminario para El Colegio de la Frontera Sur Departamento de Agroecología, Soceidad, y Ambiente. San Cristobal de las Casas, Chiapas, México. 15 May 2014.

Campus/Departmental

Falkowski, Tomasz B. “Swidden Agriculture: Bugaboo or scapegoat for tropical conservation?” Cornell’s Tropical Biology and Conservation Graduate Student Association. 9 April 2020.

Falkowski, Tomasz B. “From Consultants to Colleagues by Way of Compañeros: Farmer participatory research in Chiapas, Mexico.” Cornell University Farmer-Centered Research & Extension (IARD 7830). 19 Feb. 2020.

Falkowski, Tomasz B. “Burning Questions: Carbon Dynamics in Maya Swidden Agroecosystems.” Johannes Lehmann Laboratory Group Meeting. 2 Dec. 2019.

Falkowski, Tomasz B. “Translations: Lessons learned from science and poetics with Hach Winik.” Cornell’s Tropical Biology and Conservation – Graduate Student Association Symposium. 5 Oct. 2019.

Falkowski, Tomasz B. “Assessing the ecosystem services provided by fire management in traditional swidden agroecosystems.” Cornell University Agroecology Trilab Meeting. 4 Mar. 2019.

- Falkowski, Tomasz B.**, “A Hard Rain’s a Gonna Fall: Climate Change, Migration, and the Militarization of the US-Mexico Border. Cornell University Latin American Studies Program Research Symposium. 9 Feb. 2019.
- Schenk, Tim, Calderon, M., **Falkowski, T.B.**, Rivero, D. “Mexico’s New Era, Mexican Politics and the Future of US-Mexico Relations. Cornell University Committee on U.S.-Latin American Relations. 29 Oct. 2018.
- Falkowski, Tomasz B.**, Drinkwater, L. “Land Sparing vs. Land Sharing: Dialogue, Debate, or Dead-end?” Ecology of Agricultural Systems (PLHRT 4730). 11. Oct. 2018
- Falkowski, Tomasz B.** “Bridging Epistemological Divides in Participatory Research.” Cornell’s Tropical Biology and Conservation – Graduate Student Association Symposium. 20 Oct. 2018.
- Falkowski, Tomasz B.** “Restoring More than Trees: How traditional Lacandon Maya agroforestry can facilitate biocultural restoration.” Cornell's Tropical Biology and Conservation - Graduate Student Association. 12 Sept. 2018.
- Falkowski, Tomasz B.** “Assessing the Socioecological Restoration Potential of Successional Lacandon Maya Agroforestry in the Lacandon Rainforest of Chiapas, Mexico.” Ph.D. Capstone Seminar. Syracuse, NY. 19 April 2018.
- Falkowski, Tomasz B.** “An Emery Evaluation of Traditional Ecological Knowledge Education in Lacanja Chansayab, Chiapas, Mexico.” M.S. Capstone Seminar. Syracuse, NY. 6 May 2014
- Falkowski, Tomasz B.** “The Knowledge of Hach Winik: Applying Traditional Management for Conservation and Restoration.” Conservation Biology Club Lecture Series. Syracuse, NY. 17 Apr. 2014.
- Falkowski, Tomasz B.**, Davis, Kevin, Tarbox, Bryan. (2011). “Characterization and Comparison of Vegetation Structure in a Tropical Premontane Wet Forest.” *Texas A&M University 2011 Research Experience for Undergraduates Poster Session*. Texas A&M University, College Station, TX. <http://costaricareu.tamu.edu/files/vegetation.pdf>.
- Davis, Kevin, **Falkowski, T.B.**, Tarbox, B. (2011). “Diurnal Patterns and Environmental Drivers of Tree-level Sap Flow in a Tropical Premontane Wet Forest.” *Texas A&M University 2011 Research Experience for Undergraduates Poster Session*. Texas A&M University, College Station, TX.
- Tarbox, Bryan, Davis, K., **Falkowski, T.B.** (2011). “Comparing Light and Throughfall Transmission in a Tropical Premontane Wet Forest.” *Texas A&M University 2011 Research Experience for Undergraduates Poster Session*. Texas A&M University, College Station, TX. <http://costaricareu.tamu.edu/files/light.pdf>.

EXTENSION ACTIVITY

- 2019 Presented FoldScope workshop regarding microscopy and ecology at the Lacanja Chansayab (Chiapas, Mexico) elementary school
- 2019 Presented “The Farmer Is In: Diagnosing and solving problems on your farm” extension manual with Jody Bolluyt (Roxbury Farm, Kinderhook, NY) at Connecticut-Northeast Organic Farming Association’s 7th Annual Winter Conference.
- 2019 Presented “The Farmer Is In: Diagnosing and solving problems on your farm” extension manual with Lou Lego (Elderberry Pond Farm, Auburn, NY) at the New York Certified Organic Winter Meeting.

- 2015 Presented doctoral research regarding Lacandon agroforestry and restoration to participating farmer-collaborators in Lacanja Chansayab community meeting
- 2014 Along with Chankin, Adolfo, Diemont, S.A.W., Diemont, D., Flores, A., and Ellsworth, K., co-wrote *Guía del Campo Lacandón/Lacandon Field Guide*, which describes local flora, fauna, and agroforestry management in Lacandon Mayan, English, and Spanish for elementary school children in Lacanja Chansayab (Chiapas, Mexico).

TEACHING EXPERIENCE

State University of New York College of Environmental Science and Forestry

Syracuse, NY

Visiting instructor

ENS 596: Introduction to Agroecology: Principles to Practices Summer 2020
EFB 120: Humans and the Global Environment Spring 2018

Le Moyne College

Syracuse, NY

Adjunct Professor

BIO 225: Poisoning of a Planet Spring 2017

Hamilton College

Clinton, NY

Lecturer

BIO/ES 150: Environmental Science and Society Fall 2016

State University of New York College of Environmental Science and Forestry

Syracuse, NY

Teaching assistant

EFB 496/796: Restoring Ecosystems Fall 2015-2016
EFB 518: Systems Ecology Spring 2015
EFB 487: Fisheries Science Fall 2015
EFB 120: Humans and the Global Environment Spring 2014-2017
EFB 320: General Ecology Fall 2014, 2016, 2017
ERE 275: Ecological Engineering I Spring 2013
ERE 405/605: Sustainable Engineering Spring 2013
ERE 371: Surveying for Engineers Fall 2012-2013
ERE 425/625: Ecosystem Restoration Design Fall 2012-2013

RESEARCH EXPERIENCE & FIELD WORK

2019-Current Cornell University, Ithaca, NY
Postdoctoral fellow

- Collaborated with indigenous Maya farmers to quantify ecosystem services (including soil carbon sequestration) provided by traditional fire management
 - Applying an integrative combination of social and biophysical science participatory methods to empirically quantify carbon sequestration, soil quality, and cultural services provided by swidden agroecosystems
- 2018-2019 Cornell University, Ithaca, NY
Postdoctoral associate
- Studying farmer knowledge systems and problem-solving on organic farms in the Northeastern United States
 - Using ethnographic approaches to write a manual regarding farmer-driven research for agricultural extension agents
- 2016 State University of New York College of Environmental Science and Forestry, Adirondack Ecological Center, Newcomb, NY
Sage Apprenticeship research analyst
- Developing monitoring program of abiotic, biotic, and socioeconomic indicators of climate change and its effects at Huntington Wildlife Forest and the broader Adirondack region
- 2012-2018 State University of New York College of Environmental Science and Forestry, Syracuse, NY
Graduate assistant
- Empirically assessed effects of agroforestry tree species on soil fertility and nematode communities
 - Performed point counts and occupancy modeling to quantify bird species diversity along a chronosequence in Lacandon Maya agroforests
 - Used forest mensuration methods to quantify vegetation structure along a chronosequence in Lacandon Maya agroforests.
 - Measured crop yields from traditional Lacandon Maya *milpa* forest gardens
 - Compared restoration treatments (including planting tree saplings, passive restoration, and traditional Maya agroforestry) using a suite of social, economic, and ecological metrics
 - Twelve months of field work conducted over five years in Chiapas, Mexico.
- 2012 Colorado State University, Fort Collins, CO
Research assistant
- Surveying for a wetland restoration project in Florissant Fossil Bed National Monument and Sequoia National Park
 - Groundwater monitoring for wetland restoration project in Rocky Mountain National Park
 - Plant cover surveys measurements in alpine meadows in Yosemite National Park
 - Chamber-based gas flux measurements in high-altitude fens in Medicine Bow National Forest

SERVICE TO PROFESSION

Journal Manuscript Review

Food Security (1)
Agriculture, Ecosystems and Environment (1)
Ecological Modelling (2)
Renewable Agriculture and Food Systems (2)
Ecological Engineering (1)
Environment, Development and Sustainability (1)
International Journal of Biodiversity and Conservation (1)
The Open Ecology Journal (1)

Leadership in Professional Organizations

2017-2018 Association of Tropical Biodiversity and Conservation Young and Emerging Scientists board graduate student representative at large
2015-2016 Society for Ecological Restoration Mid-Atlantic Chapter board student representative
2014-2015 State University of New York College of Environmental Science and Forestry Society for Ecological Restoration student chapter service chair

Translations

Enríquez, Paula L., and José Raúl Vázquez Pérez. 2015. "Los Búhos de México." In *Los Búhos Neotropicales: Diversidad Y Conservación*. San Cristóbal de las Casas, Chiapas, México: El Colegio de la Frontera Sur.
Restoring Ecosystems Lab, and Stewart A W Diemont. 2015. "Wetland Restoration Project Proposal for the 14th de Septiembre Neighborhood, San Cristóbal de Las Casas, Chiapas, Mexico."

DEPARTMENTAL/UNIVERSITY SERVICE

2019-Current Cornell University Tropical Biology and Conservation graduate student organization advisory board member
2018-2019 Cornell University Committee on U.S.-Latin America Relations Mexico working group member
2015-2017 SUNY ESF Sustainability Committee graduate student representative
2015-2017 State University of New York College of Environmental Science and Forestry graduate ambassador
2014 State University of New York College of Environmental Science and Forestry Undergraduate Spotlight on Research Poster Session judge

PROFESSIONAL DEVELOPMENT

2020 Cornell University Atkinson Center transdisciplinary research fellows working group

- 2020 Cornell Atkinson-Environmental Defense Fund interdisciplinary collaboration workshop
- 2020 Cornell Statistical Consulting Unit introduction to path and mediation analysis workshop
- 2019 Cornell Atkinson-Environmental Defense Fund PowerPoint and design workshop
- 2019 Cornell Atkinson science and communication workshop
- 2019 Cornell University Center for Teaching Innovation GET SET workshop certificate
- 2019 Cornell University Atkinson Center Sustainability Leadership Program
- 2019 Cornell University's Center for Teaching Innovation Teaching & Learning in the Diverse Classroom course

COMMUNITY INVOLVEMENT/OUTREACH

- 2016 Syracuse University, Syracuse, NY
Stevenson Educational Center for Student-Athlete Development tutor
- 2010-2011 Buffalo-Niagara Green Expo, Buffalo, NY
3rd Annual Buffalo-Niagara Green Expo intern

PROFESSIONAL MEMBERSHIPS

- Association for Tropical Biodiversity and Conservation (current)
- International Society of Tropical Foresters (current)
- American Ecological Engineering Society (former)
- Society for Ecological Restoration (former)

RELATED PROFESSIONAL SKILLS

Computer

ESRI ArcGIS/QGIS
R/RStudio

Languages

English (ILR Level 5: Native or Bilingual Proficiency)
Polish (ILR Level 5: Native or Bilingual Proficiency)
Spanish (ILR Level 4: Full Professional Proficiency)