Erik S. Yando, PhD

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EDUCATION

2018 PhD - Environmental and Evolutionary Biology

University of Louisiana at Lafayette (Supervisor: Mark Hester)

2014 MS - Biology

University of Louisiana at Lafayette (Supervisor: Mark Hester)

2010 BA - Biological Sciences & Botany (Double Major)

Connecticut College (Supervisors: Anne Bernhard & T. Page Owen)

EMPLOYMENT

2020-Present	Assistant Professor		
	Department of Biological Sciences, Old Dominion University, Norfolk, Virginia		
2018-20	Postdoctoral Research Fellow - Natural Capital Singapore & The Mangrove La		
	Department of Geography, National University of Singapore, Singapore		
2014-17	University Doctoral Fellow - Coastal Plant Ecology Lab		
	Department of Biology, University of Louisiana at Lafayette, Lafayette, Louisiana		
2015-17	Contracted Researcher (Summers)		
	U.S. Geological Survey, Wetland & Aquatic Research Center, Lafayette, Louisiana		
2012-14	Graduate Research Assistant - Coastal Plant Ecology Lab		
	Department of Biology, University of Louisiana at Lafayette, Lafayette, Louisiana		
2012	Research/Teaching Assistant - Microbial Ecology Lab		
	Department of Biology, Connecticut College, New London, Connecticut		
2010-11	Instructor		
	Newfound Harbor Marine Institute, Big Pine Key, Florida		
2010-11	Research Assistant (Summers) - TIDE Project		
	Connecticut College/Marine Biological Laboratory, Byfield, Massachusetts		

PUBLICATIONS (Δ = undergraduate co-author)

- 16. Alemu I, JB, Yaakub, SM, **Yando, ES**, Lau, R, Lim, CC[△], Puah, JY[△] & DA Friess. 2022. Geomorphic gradients in shallow seagrass carbon stocks. *Estuarine, Coastal, and Shelf Science*. 265: 107681
- 15. Yando, ES, Sloey, TM, Dahdouh-Guebas, F, Rogers, K, Cannicci, S, Abuchahla, GMO, Canty, SWJ, Jennerjahn, TC, Ogurcak, DE, Connolly, RM, Diele, K, Lee, SY, Rowntree, JK, Sharma, S, Adams, JB, Cavanaugh, KC, Cormier, N, Feller, IC, Fratini, S, Ouyang, X, Wee, AKS & DA Friess. 2021. Conceptualizing ecosystem degradation using mangrove forests as a model system. *Biological Conservation*. 263: 109335
- 14. Jones, SF, Stagg, CL, **Yando, ES**, James, WR, Buffington, K & MW Hester. 2021. Stress gradients interact with disturbance to reveal alternative states in salt marsh: multivariate resilience at the landscape scale. *Journal of Ecology.* 109 (9): 3211-3223
- 13. Lønborg, C, Müller, M, Butler, ECV, Jiang, S, Ooi, SK, Huong, TD, Wong PY, Mohamed Ali, SB, Cui, C, Wee, BS, **Yando, ES**, Friess, DA, Rosentreter, JA, Eyre, BD & P Martin. 2021. Are nutrient cycling pathways in tropical and temperate coastal waters really different? *Estuarine, Coastal, and Shelf Science*. 262: 107571

PUBLICATIONS (continued)

- 12. **Yando, ES,** Jones, SF & MW Hester. 2021. Limited mangrove propagule retention at a latitudinal range limit: spatiotemporal patterns at the patch-scale. *Estuaries and Coasts*. 44(3): 834-845
- 11. Friess, DA, Dahdouh-Guebas, F, Behara, S, Cannicci, S, Chua, SC, Duke, N, Feller, I, Jaafar, Z, Pulukkuttige, JL, Koedam, N, Krauss, K, Lee, SY, Mancera, JE, Ruwa, R, Vannini, M & ES Yando. 2021. Scientific contributions of the Mangrove Macrobenthos and Management (MMM) conference series, 2000-2019. Estuarine, Coastal, and Shelf Science. 248: 106742
- 10. Friess, DA, **Yando, ES,** Alemu, JB, Wong, LW, Soto, SD & N Bhatia. 2020. Chapter 3- Ecosystem services and disservices of saltmarshes and mangrove forests. *Oceanography and Marine Biology- An Annual Review.* 58: 107-142
- 9. Friess, DA, **Yando, ES**, Wong, LW & N Bhatia. 2020. Indicators for scientific value as an ecosystem service for coastal and marine habitats. *Ecological Indicators*. 113: 106225
- 8. Friess, DA, Krauss, KW, Taillardat, P, Adame, F, **Yando, ES,** Cameron, C, Sasmito, SD, & M Sillanpää. 2020. Mangrove blue carbon in the face of deforestation, climate change and restoration. *Annual Plant Reviews.* 3: 427-456
- 7. Friess, DA, **Yando, ES**, Abuchahla, GMO, Adams, JB, Cannicci, S, Canty, SWJ, Cavanaugh, KC, Connolly, RM, Cormier, N, Dahdouh-Guebas, F, Diele, K, Feller, IC, Fratini, S, Jennerjahn, TC, Lee, SY, Ogurcak, DE, Ouyang, X, Rogers, K, Rowntree, JK, Sharma, S, Sloey, TM & AKS Wee. 2020. Mangroves give cause for conservation optimism, for now. *Current Biology*. 30(4): R153-R154
- 6. Richards, D, Masoudi, M, Oh, RRY, **Yando, ES,** Zhang, J, Friess, DA, Grêt-Regamey, A, Tan, PY & PJ Edwards. 2019. Global variation in climate, human development, and population density has implications for urban ecosystem services. *Sustainability*. 11(22): 6200
- 5. **Yando, ES,** Osland, MJ, Jones, SF & MW Hester. 2019. Jump-starting coastal wetland restoration: A comparison of marsh and mangrove foundation species. *Restoration Ecology*. 27(5): 1145-1154
- 4. Jones, SF, **Yando, ES,** Stagg, CL, Hall, CT & MW Hester. 2019. Restoration affects sexual reproductive capacity in a salt marsh. *Estuaries and Coasts*. 42(4): 976-986
- 3. **Yando, ES,** Osland, MJ & MW Hester. 2018. Microspatial ecotone dynamics at a shifting range limit: plant-soil variation across salt marsh-mangrove interfaces. *Oecologia*. 187(1): 319-331
- 2. Yando, ES, Osland, MJ, Willis, JM, Day, RH, Krauss, KW & MW Hester. 2016. Salt marsh-mangrove ecotones: using structural gradients to investigate the effects of woody plant encroachment on plant-soil interactions and ecosystem carbon pools. *Journal of Ecology*. 104(4): 1020-1031

 * Selected for Journal of Ecology's Virtual Issue- Plants in a Changing World: Global Change and Plant Ecology, 2017
- 1. Peng, X, Yando, ES, Hildebrand E, Dwyer, C, Kearney, A, Waciega, A, Valiela, I & AE Bernhard. 2013. Differential responses of ammonia-oxidizing archaea and bacteria to long-term fertilization in a New England salt marsh. *Frontiers in Microbiology*. 3(445): 1-11

PUBLICATIONS (Submitted or In-Preparation)

- Manimaran, S^{Δ} , **Yando, ES** & N Bhatia. *Submitted*. Factors influencing the perception of cultural ecosystem services among park users in Singapore. Target Journal: *Ambio*
- Friess, DA, Gatt, Y, Fung, TK, Alemu, J, Bhatia, B, Case, R, Chua, SC, Huang, D, Valerie Kwan, V, Lim, KE, Nathan, Y, Ow, YX, Hortua, D, Sloey, T, , **Yando, ES**, Ibrahim, H, Koh, LP, Puah, JY, Teo, S L-M8, Tun, K, Wong, LW, and SM Yaakub. *Submitted.* Blue carbon science, management, and policy across a tropical urban landscape. Target Journal: *Journal of Environmental Management*
- Yando, ES, James, WR, Jones, SF, Colombano, DD, Nolte, S, Montemayor, D, Raw, J, Ziegler, S, Chen, L, D. Daffonchio, Fusi, M, Rogers, K, & L Sergeinko. *In prep.* Conceptualizing salt marshes for global comparisons. Target Journal: *Global Ecology and Biogeography*
- Lagomasino, D, Sloey, TM, Castañeda-Moya, Charles, SP, Xiong, L & **ES Yando**. *In prep*. The kids are alright: Challenges to and importance of considering intermediate ontogenetic stages in mangrove forest recovery and restoration. Target Journal: TBD

TEACHING & TRAINING EXPERIENCE

Courses TaughtSpring 2022Botany (BIOL 308) - ODUSpring 2021Wetland Plants (BIOL 419/519) - ODUFall 2020, 2021Marine Ecology (BIOL 415W/515) - ODU2016Estuarine and Coastal Ecology- UL Lafayette2012Molecular Ecology- Connecticut CollegeTraining2017Biology Education Certification, UL Lafayette

ADVISING & MENTORSHIP

Students Advised	2021-Present	Zlatka Rebolledo Sánchez	MS Student, ODU- Biology	
/Mentorship	2019-20	Sonali Manimaran	Senior Thesis, NTU-ASE (Co-Adv.)	
	2022-Present	Sydney Dunn	UG Researcher, ODU-Biology	
	2021	Victoria Smith	Summer Grad Researcher, ODU	
		Daniel Perez	UG researcher, ODU	
		Chandler Slater	UG researcher, ODU	
	2018-20	Undergraduate & Graduate Mentor- NUS & NTU, Singapore		
		-5 undergraduate, 3 graduate, & 2 post-bac. researchers		
	2014-18	Undergraduate Mentor- UL Lafayette		
		- 9 undergraduate researchers at UL Lafayette and USGS		
Grad. Committees	Present	Brandon Martinez	MS Student- ODU-Biology	
		Nathan Teel	MS Student- ODU-Biology	
		Sarah Durham	MS Student-ODU-Biology	
		Ella Dipetto	MS Student-ODU- Biology	
		Devani Jolman	PhD Student-ODU-Biology	

PRESENTATIONS (*indicates undergraduate collaborator)

2021 Yando, ES. A multi-scale salt marsh typology for global comparisons. ODU Center for Coastal Physical Oceanography & Institute for Coastal Adaptation and Resilience Seminar (Oral- Invited) Yando, ES. Plant-soil interactions across coastal ecosystem transitions at multiple scales. ODU Department of Oceanography & Earth Sciences (Oral- Invited)
Yando, ES. Coastal Wetlands as Model Systems for Understanding Change, Restoration, and

Yando, ES. Coastal Wetlands as Model Systems for Understanding Change, Restoration, and Degradation. Department of Biological Sciences (Oral- Invited)

2019 Yando, ES, Alemu, JB, Bhatia, N & DA Friess. Carbon and plant-soil interactions across the coastal seascape. 25th Biennial Conference of the Coastal and Estuarine Research Federation (CERF). Mobile, Alabama (Oral)

Yando, ES, Manimaran, S⁺, Wong, LW, Alemu, JB, Bhatia, N & DA Friess. Ecosystem services of mangroves and other coastal systems from non-urban to urban: A review from the tropics. Mangrove, Macrobenthos, & Management 5 (MMM5). Singapore (Oral)

Yando, ES & DA Friess. Nutrient dynamics in mangroves. Nutrient Cycling in Tropical Harbours Workshop. Asian School of the Environment. Nanyang Technological University, Singapore (Oral) Yando, ES. Natural Capital Project (Singapore's Coastal and Marine Ecosystem Services).

Resilience of Coastal Ecosystems in Singapore Workshop. National University of Singapore,

Singapore (Oral)

Yando, ES. Singapore's natural capital: Ecosystem services in the urban environment. Faculty of Arts and Social Sciences Research Cluster. National University of Singapore, Singapore (Oral)

PRESENTATIONS (continued)

- **Yando, ES** & MW Hester. Mechanisms of mangrove expansion: Dispersal, survival, and growth dynamics at the salt marsh-mangrove ecotone. 24th Biennial Conference of the Coastal and Estuarine Research Federation (CERF). Providence, Rhode Island (Oral)
 - Yando, ES & MW Hester. Restoration and shifting range limits: Opportunities and challenges for dual-species restoration. Society for Ecological Restoration-Southeast Chapter 2017 Symposium. Ocean Springs, Mississippi (Oral)
 - Yando, ES. 2017. Graduate Student Showcase Poster Competition, UL Lafayette. Mangrove propagule dispersal and establishment at the salt marsh-mangrove ecotone: Linking hydrology, dispersal distance, and propagule retention. Lafayette, Louisiana (Poster) *3rd Place STEM Pos
- Yando, ES, Osland, MJ & MW Hester. Transplant success, expansion, and natural recruitment of vegetation following coastal wetland restoration: Understanding key biotic and abiotic drivers. Fall 2016 Gulf Estuarine Research Society/Society for Wetland Scientist-South Central/South Atlantic Chapter Joint Meeting. Pensacola, Florida (Oral) *1st Place Student Oral Presentation GERS Yando, ES & MW Hester. Mangrove propagule dispersal and establishment at the salt marshmangrove ecotone: Linking hydrology, dispersal distance, and propagule retention. Mangrove and Macrobenthos Meeting 4 (MMM4). St. Augustine, Florida (Poster)
 Yando, ES, Osland, MJ & MW Hester. Vegetation trajectories following coastal wetland restoration: Understanding key biotic and abiotic drivers of planting success and natural recruitment. State of the Coast 2016 (SOC16). New Orleans, Louisiana (Oral)
- **Yando, ES**, Osland, MJ, Willis, JM, Day, R, Krauss, KW & MW Hester. Mangrove forests vs. salt marshes: the ecological implications of climate-induced woody plant encroachment on plant-soil interactions in tidal saline wetlands. Gulf Coast Plains and Ozarks LLC & Southeast Climate Science Center Webinar (Webinar)
 - Yando, ES, Osland, MJ, Willis, JM, Day, R, Krauss, KW & MW Hester. Heterogeneity in plant ecological interactions at a shifting salt marsh-mangrove ecotone in the northern Gulf of Mexico. 23rd Annual Society for Wetland Scientists- South Central Chapter Meeting. Corpus Christi, Texas (Oral)
 - Yando, ES, Osland, MJ & MW Hester. Micro-spatial examination of above- and belowground processes at the salt marsh-mangrove ecotone in the northern Gulf of Mexico. Joint Aquatic Sciences Meeting 2014 (JASM-2014). Portland, Oregon (Oral)
 - **Yando, ES,** Osland, MJ, Willis, JM, Day, R, Krauss, KW & MW Hester. Salt marsh-mangrove structural gradients: Implications for restoration within a shifting ecotone in Louisiana and across the northern Gulf of Mexico. State of the Coast 2014 (SOC14). New Orleans, Louisiana (Invited Oral)
- **2013 Yando, ES**, Osland, MJ, Willis, JM, Day, R. Krauss, KW & MW Hester. Salt marsh-mangrove ecotones in the Northern Gulf of Mexico: a comparison of plant-soil variability across structural gradients. 22nd Biennial Conference of the Coastal and Estuarine Research Federation (CERF). San Diego, California (Oral)
 - Yando, ES, Hester, MW, Krauss, KW, Day, R & MJ Osland. The belowground implications of mangrove forest migration: Plant-soil variability across forest structural gradients in TX, LA, and FL. Texas Mangrove Research Symposium, Port Aransas, Texas (Oral)
- **2010 Yando, ES**, Cohen, A, Haight, C & RS Warren. Quantifying and Determining a Possible Mechanism of Artificially Fertilized Plum Island Sound Salt Marsh Creek Banks. New England Estuarine Research Society Fall 2010 Meeting, Provincetown, Massachusetts (Oral)

GRANTS

Grants (Pending)

2021

-National Science Foundation, DEB-EID. The multi-scaled dynamics of spotted fever group rickettsiosis ecology. PI: H. Gaff; Senior Personnel: **E. Yando**, D. Gauthier, T. Sloey, W. Hynes. \$3,000,000

Grants (Funded)

2022-2024

-National Science Foundation, IUSE- Engaged Student Learning: Level I. Enhancing Undergraduate Education in Botany through Teaching, Research, Representation, and Experience. Award ID 2142348. PI: L. Wallace; Co-PIs: **E. Yando**, T. Sloey. \$290,471

2022

-Commonwealth Center for Recurrent Flooding Resilience. Assessment of restoration planting production supply and demand to support workforce development and resilience in Virginia. PI: T. Sloey, Co-PI: **E. Yando**. \$17,500

2021

-Virginia Space Grant Consortium, Internal Solicitation. From Swamp to Satellite: Connecting Multi-Scalar Monitoring of Forested Wetlands for Student Researchers in a Recent Tornado Scar. Award period: May-Sept. 2021. PI: **E. Yando**; Co-PIs: Sloey, T. Allen, G. McLeod. \$9,425

2020-2022

-Long-term Urban Mangrove Protection Understanding & Rehabilitation Project (LUMPUR) Yale-NUS College Seed Grant, PI: M. Van Bruegel; Co-PIs: **E. Yando**, T. Sloey, E. Tan, D. Friess, B. Wainwright- \$180,000 SGD

2018

-UL Lafayette Graduate Student Organization, Research & Materials Grant- \$260

2017

-Society of Wetland Scientists, Student Research Grant- \$1000

-UL Lafayette Graduate Student Organization, Research & Travel Grant- \$780

-Coastal and Estuarine Research Federation 2017 Travel Grant- \$300

2016

-State of the Coast Conference 2016, Student Grant- \$160

-Gulf Estuarine Research Society- Student Travel Grant- \$250

-UL Institute for Coastal and Water Research (ICaWR), SOC Student Travel Grant -UL Lafayette Graduate Student Organization, Research & Travel Grant- \$1160

2015

-UL Lafayette Graduate Student Organization, Research Grant- \$480

2014

-UL Lafayette Ecology Center, Student Research Grant- \$250

-State of the Coast Conference 2014, Student Grant-\$160

-UL Lafayette Graduate Student Organization, Research & Travel Grant- \$560

-Jay Huner Travel Support Grant- \$100

-Society for Wetland Scientist South Central Chapter- Student Travel Grant- \$75

Grants (Non-Funded)

2020

-NSF MRI Proposal: Acquisition of an Isotope Ratio Mass Spectrometer for Multidisciplinary Biogeosciences Research and Training. PI: J. Whiteman, et al. (ODU Biological Sciences and OEAS) Senior Personnel: **E. Yando,** T. Sloey. \$964,954 USD. [not selected for submission]

-NOAA Effects of Sea Level Rise (ESLR) Proposal. Shored Up: Evaluating the performance of natural and nature-based shorelines today to predict shoreline performance tomorrow. PI: T. Sloey, Co-PIs: **E. Yando**, J. Tamborski. 2021-2025; \$940,000 USD. [not encouraged for full proposal]

2021

- Virginia Space Grant Consortium, New Investigator Program. Improving connections between remote sensing and ground-truthing to monitor post-disturbance recovery following a tornado in the Great Dismal Swamp. PI: T. Sloey; Co-PIs: **E. Yando**, T. Allen, G. McLeod. \$10,000 (Submitted)

AWARDS & FELLOWSHIPS

Awards

2017 -UL Lafayette Graduate School, STEM Poster Competition- 3rd Place

2016 -Wetland Foundation, Seneca Award- \$1,500

-Influencer of the Year, The Independent Monthly with TEDxVermilionStreet

-Gulf Estuarine Research Society- 1st Place Student Oral Presentation

-UL Lafayette Graduate School, Graduate STEM Paper Competition- 2nd Place

2015 -Martial F. Billeaud Endowed Scholarship- \$1,300

<u>Fellowships</u>

2018-20 -National University of Singapore, Postdoctoral Research Fellowship (3 years) 2014-17 -UL Lafayette Graduate School, University Fellowship (3 years)- \$18,000/ year

PROFESSIONAL MEMBERSHIPS

-Coastal and Estuarine Research Federation (CERF)

PROFESSIONAL SERVICE

2021-Present Special Issue Editor, Ecosystem Health & Sustainability

2021-Present Member, Faculty Search Committee, ODU Biological Sciences

2021-Present Member, Seminar Committee, ODU Biological Sciences

2020-Present Member, Kirk Wetland Fund Committee, ODU Biological Sciences

2020-21 Member, Teaching Portfolio Review Subcommittee, ODU Biological Sciences

Reviewer, National Academy of Science-PEER Coastal Environment Reviewer Panel

2019-20 Special Issue Editor, Estuarine, Coastal, and Shelf Science

2019 Student Presenter Judge, Coastal and Estuarine Research Federation Meeting

2019 Co-Organizer, Mangrove, Macrobenthos, & Management 5 Post-Conference Workshop
 2018-19 Organizing Committee, Mangrove, Macrobenthos, & Management 5 Conference

Organizing Committee, UL Lafayette Graduate Student Symposium

2015-17 Judge, Louisiana Region VI Engineering and Science Fair

2012-Present Peer reviewer for: PLoS ONE, Science of the Total Environment, Journal of Ecology, Scientific

Reports, Ecosphere, Annals of Botany, Hydrobiologia, Estuaries and Coasts, Journal of Forestry Research, Journal of Arid Environments, Estuarine, Shelf, and Coastal Science, TREES, Wetlands, Plants and Soil, Regional Environmental Change, Remote Sensing, AGU Book Series, African Journal of Ecology, Virginia Journal of Science, Restoration Ecology, Nature Climate Change, Limnology &

Oceanography

COMMUNITY SERVICE

2020-Present Volunteer, Lafayette Wetlands Partnership

2017-18 Core Team, Acadian Rain Gardens, funded via Lafayette's 24-Hour Citizen Project 2015-17 Lead Curator (2017), Production Manager (2015- 2016), TEDxVermilionStreet

EDITORIALS & NON-PEER REVIEW ARTICLES

Friess, DA, Chua, SC, Jaafar, Z, Krauss, KW & **ES Yando**. 2021. Mangroves and people: Impacts and interactions. *Estuarine, Coastal and Shelf Science*. 248: 107155

WORKSHOPS & TRAINING PROGRAMS

- 2021 Bold, Inclusive Conversations. Old Dominion University. Norfolk, Virginia
- 2020 Climate Change Defense. National University of Singapore. Singapore
- 2019 Mangrove, Macrobenthos & Management 5 Post-Conference Workshop. *Tioman, Malaysia* Nutrient Cycling in Tropical Harbors. Nanyang Technological University. *Singapore* Resilience of Coastal Ecosystems in Singapore. National University of Singapore. *Singapore*
- **2018** Ecological Infrastructure for Coastal Resilience. National University of Singapore. *Singapore*
- 2016 Mangrove, Macrobenthos & Management 4 Post-Conference Workshop. Long Key, Florida
- 2015 Building Community Resilience Through Restoration of Ecosystem Components. The Water Institute of the Gulf. *Baton Rouge, Louisiana*
- 2009 Northern Nature and Environmental Science Program. *University of Oulu, Finland* (Spring Semester)

RELEVANT SKILLS

Field and Lab Skills: Small Boat Operation, Trailering, Maintenance & Repair; Open Water SCUBA; Wetland, Aquatic, Wetland, Forest & Coastal Plant Identification; Plant & Soil Physicochemical Analyses; RTK-GPS, GPS, & Elevation Surveying; Time Lapse Video Techniques

Computer Skills: R, JMP, ImageJ, ArcGIS