

Branko Hilje Curriculum Vitae

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Profile

I am a Biologist with a Doctorate in Earth and Atmospheric Sciences, a Master's in Ecology, and a Licenciatura in Zoology. I have more than 10 years of experience in lecturing and designing courses for the classroom, online, and field courses, and experience in conducting research. I have taught different courses mainly in Biology, Ecology, Conservation, and Human impact in natural ecosystems at the university level in Costa Rica, the United States, and Canada. I have experience supervising research projects for undergraduate and graduate students. Regarding my research experience, the topic I am most interested in is habitat conservation and restoration for fauna in the tropics. I am interested in evaluating changes in fauna species diversity and composition in tropical forested habitats such as tropical wet, dry, and cloud forests that have recovered from human activities in the past (e.g., agriculture, deforestation, and cattle ranching) using different methodologies and tools including remote sensing. I have knowledge of managing and coordinating research, environmental education, and ecotourism programs for non-governmental organizations.

Skills & Abilities

My teaching experience includes designing, preparing, and teaching lectures in the classroom, online, and in the field, and designing and supervising students' field research projects. Besides this, I have training in several different teaching and learning skills such as how to build healthy and respectful working relationships, mitigating conflicts with co-workers and supervisors, ethics in teaching, dealing with sensitive issues (e.g., racism, genderism, and sexism) in the classroom and workplace, and motivating students. As for my research skills, I have knowledge of experimental design, statistical (e.g., R packages), and landscape analysis (e.g., GIS), and experience in communicating results. I have knowledge and experience in designing, implementing, and carrying out projects involving science, environmental education, and ecotourism for conservation, and skills in writing proposals to fund these activities. As for my soft skills, I am a flexible self-motivated person open to new learning and working experiences, I can set goals and achieve them in a timely manner, and I have respectful and friendly relationships with students, personnel, co-workers, and supervisors.

Professional Experience

Scientific Coordinator, Organization for Tropical Studies (OTS), Costa Rica Current

Writing research funding proposals for projects carried out in the OTS research stations in Costa Rica y South Africa. Academic and Scientific support to local and international researchers, professors, students, and visitors at the OTS research stations.

Assistant Professor, Forestry Engineering School, Tecnológico de Costa Rica Main Campus Current

Teaching General Botany, Forest Ecology, Ecology and management of secondary forests courses. Member of the Editorial Board of Revista Forestal Mesoamericana Kurú

Academic Director, Council on International Educational Exchange (CIEE), Monteverde, Costa Rica January - June 2022

Managing the CIEE Academic Department which includes designing, supervising, and coordinating courses for the CIEE programs carried out in Costa Rica and in other CIEE campuses around the world

Lecturer, Tropical Ecology and Conservation Program - Council on International Educational Exchange (CIEE), Monteverde, Costa Rica January 2020 - January 2022

Courses: 1. Tropical Community Ecology and Conservation, 2. Independent Research in Ecology, and 3. Humans in the Tropics

Internships: Ecology and Sustainability

Teaching classroom, online, and field courses for semester abroad programs, supervising students' field research projects, supervising high school students in biology-related activities

Academic Director, Reserva Biológica Tirimbina (RBT), Sarapiquí, Heredia, Costa Rica January 2019 - January 2020

Managing the Academic Department at RBT which includes coordinating and supervising the Environmental Education Program, designing, and carrying out research projects, and creating and teaching courses for national and international undergraduate students. Managing budget for the Academic Department (e.g., \$140,000)

Field Assistant, Avian Research in the Boreal Forest, Biological Sciences Department, University of Alberta, Canada July 2018 and July 2020, respectively

Fieldwork for acoustic and visual data collection, carrying out bird song propagation experiments in boreal forests, bird species identification from

sound files, and training software for automated bird ID

Guest Lecturer, Biogeography Course, Environmental Applications of Geographic Information Systems Course - Earth and Atmospheric Sciences Department, University of Alberta, Canada

October 2015 and March 2018,
respectively

Teaching about acoustic data collection and analysis techniques for fauna

Teaching Assistant, Introduction to Geographic Information Systems and Remote Sensing Course - Earth and Atmospheric Sciences Department, University of Alberta, Canada

September 2014 - November 2017

Teaching GIS techniques and analysis tools for undergraduate students

Teaching Assistant, Environmental Earth Science Field School - Earth and Atmospheric Sciences Department, University of Alberta, Canada
Teaching forest structural characteristics measurement and acoustic fauna monitoring techniques in the field. Supervise and guide students field research projects

February 2015 - February 2016

Lecturer and Research Assistant, Forest Engineering Department - Tecnológico de Costa Rica (TEC)

2013 - 2014

2006 - 2008

Courses: Introduction to Biology (Lecture and Lab), Wildlife, Botany (Guest Lecturer), Environmental Impact Assessment.

Teaching and conducting research for the project Tropi-Dry: Human and biophysical dimensions of tropical dry forests in the Americas

Lecturer, Tropical Ecology and Conservation Program - Council on International Educational Exchange (CIEE), Monteverde, Costa Rica

2011 - 2013

Course: Humans in the tropics. Teaching classroom and field courses for semester abroad programs. Teaching tropical ecology and the effect of human activities such as cattle ranching, agriculture, logging, and tourism in tropical forests. Designing and supervising students' field research projects

Teaching Assistant, Ecology Laboratory Course, Department of Biology, University of Puerto Rico

2011

Teaching the Ecology Laboratory course and supervising research projects for undergraduate students

Lecturer, Faculty of Science, Biology Department, School of Medicine, Universidad Latina de Costa Rica

2005 - 2008

Courses: Introduction to Biology (Lecture and Lab), Zoology of Vertebrates (Lecture and Lab), Tropical Ecology, Introduction to Biology for School of Medicine (Lecture and Lab). Teaching in the classroom and supervise Lab practices

Amphibian Consultant, IUCN's Red List of Threatened Species, Costa Rica Current

Providing current information about the conservation status of amphibians in Costa Rica for IUCN's workshops

Environmental Consultant - DEPPAT, Costa Rica 2006 - 2008

Carrying out Environmental Impact Assessments for development projects related to tourism, hydroelectric dams, urban planning, industry, landfills, mining, and roads as a requisite by the National Environmental Technical Secretary (SETENA) in Costa Rica

Education

Earth and Atmospheric Sciences Department, University of Alberta - Doctor of Philosophy 2018

Department of Biology, University of Puerto Rico – Master of Science in Ecology and Systematics 2011

Department of Biology, University of Costa Rica - Licenciatura in Zoology 2004

Department of Biology, University of Costa Rica - Bachelor's in Biology 2003

Faculty of Graduate Studies and Research, University of Alberta - Graduate Teaching and Learning Program 2016 - 2018

Courses: 1. Building Working Relationships, 2. Mitigating Conflict in Graduate Student-Supervisor Relationships Workshop, 3. Ethics in Teaching, 4. Isms in Teaching: How to Deal with Sensitive Issues Such as Racism, Genderism, Sexism, and so on in Your Classroom, 5. Effective Grading Practices in Biology, 6. Gamify Your Course, 7. Giving Effective Feedback to Your Students, 8. HMM: How Humour, Music, & Movement Enhance Student Engagement, 9. How to Teach Fish When You Are A Penguin, 10. Motivating Students, 11. The First Class: How to make it First Class, and 12. Using Your Voice in the Classroom

Organización para Estudios Tropicales (OET) y Universidad de Costa Rica (UCR)

Course: Global Earth Engine for Ecology y Conservation 2021

Monteverde Institute, Costa Rica - QGIS Software Course 2013

USGS - Online Course: Designing Natural Resource Monitoring Surveys	2009
Organization for Tropical Studies - Neotropical Herpetology Course	2008
University of Costa Rica and Cornell University - Quantitative Methods and Wildlife Population Dynamics	2007

Scholarships and Funding

Travel Award (\$1,500) , Faculty of Graduate Studies and Research, University of Alberta	2018
Nestor and Sue Cebuliak Graduate Award (\$4,800) , Faculty of Graduate Studies and Research, University of Alberta	2018
Academic Travel Award (\$500) , Graduate Students' Association (GSA), University of Alberta	2018
Incentive funding for graduate studies (\$32,000) , The government of Costa Rica	2014
Scholarship Program for outstanding academic merit (\$12,000) , US Federal Funding	2010
Incentive research funding for graduate studies (\$5,000) , The government of Costa Rica	2010
Graduate Fellow Scholarship (\$5,000) , The Organization for Tropical Studies (OTS)	2010

Journal Reviews, Student Supervision & Voluntary work

Reviewer Board Journal <i>Forests</i> <i>Frontiers in Remote Sensing</i> <i>Global Ecology and Conservation</i>	Current
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Occasional Reviewer

Journals: *Biological Conservation*, *Journal of Animal Ecology*, *Diversity*, *Animal Conservation*, *Applied Sciences*, *EcoHealth*, *Ethology*, *Land*, *Tropical Conservation Science*, *Sustainability*, *International Journal of Tropical Biology and Conservation*, *Revista de Ciencias Ambientales UNA*, *Biota Colombiana*, *Cuadernos de Investigación (UNED)*

Masters Comitee Member

Student: Ana Cecilia Gutiérrez Vannucci Research Project: Effects of anthropogenic pollution in amphibian acoustic communication in urban areas Escuela de Biología - Sistema de estudios de Posgrado de la Universidad de Costa Rica	2022
Student: Tobias Normann Research Project: Prevalence and distribution of the pathogenic amphibian fungus <i>Batrachochytrium dendrobatidis</i> across different microhabitats in the Monteverde bioregion Department of Biology, University of Copenhagen, Denmark	Current
Science Fair Judge , Local elementary and high schools, Sarapiquí, Heredia, Costa Rica	2019

Communication

Symposiums and Meetings

The Society of Canadian Ornithologists - Société des Ornithologistes du Canada – Oral Presentation	2022
The American Ornithological Society (AOS) and the Society of Canadian Ornithologists-Société des ornithologistes du Canada (SCO-SOC) – Online Presentation	2021
Ecoacoustics Congress – Online Presentation	2021
I Simposio Nacional de Bioacústica, Universidad Estatal a Distancia (UNED), San José, Costa Rica - Oral Presentation	2020
XXIII Congreso de la Sociedad Mesoamericana para la Biología y la Conservación, Antigua, Guatemala - Oral Presentation	2019
XI Congreso de Ornitología Neotropical - VI Congreso Costarricense de Ornitología, San José, Costa Rica – Oral Presentation	2019
The 27th International Ornithological Congress, Vancouver, BC, Canada - Poster Presentation	2018
European Conference of Tropical Ecology, Sorbonne University, Paris, France - Oral Presentation	2018

Research Symposium, ATLAS Graduate Student Society, Earth and Atmospheric Sciences Department, University of Alberta - Oral Presentation	2017
IX Latin America Herpetology Symposium, Curitiba, Brazil - Oral Presentation	2011
XIV Mesoamerican Conservation Biology Society Symposium, San José, Costa Rica - Two Oral Presentations	2010
Association for Tropical Biology and Conservation, Annual Meeting, México - Two Poster Presentations	2007

Publications

Hilje, B., Rojas-Valerio, E., García, M., Lizana, C., & Miranda, C. (*accepted for publication with minor revisions in the journal Ornitología Neotropical*). Bird diversity of the Tirimbina Biological Reserve: the role of research, environmental education and ecotourism in bird conservation in a tropical wet forest in Costa Rica.

Sánchez, N. V., **Hilje, B.**, & Bayne, E. M. (2022). Lincoln's Sparrow (*Melospiza lincolni*) increases singing rate in areas with chronic industrial noise. IBIS <https://doi.org/10.1111/ibi.13174>.

Hilje, B. (2021). Historia natural de la región de Santa Rosa. In: Santa Rosa, paraje de biodiversidad y escenario de la libertad. Hilje Quirós, L., Arias Sánchez, R. F., Hilje, B., Hilje Quirós, B., & Solórzano Vargas, W. Editorial Universitaria, Universidad Técnica Nacional, Costa Rica.

Hilje, B., Chaves, G., Klank, J., Timmerman, F., Feltham, J., Gillingwater, S., Piraino, T., & Rojas-Valerio, E. (2020). Amphibians and Reptiles from of the Tirimbina Biological Reserve: A baseline for conservation, research and environmental education in a lowland tropical wet forest in Costa Rica.

Hilje, B., Sánchez, N. V., Bayne, E. M., & Sánchez-Azofeifa, A. (2020). Bird Assemblage Recovery in a Chronosequence of Tropical Dry Forests in Costa Rica. *Forests*, 11(6), 629.

Hilje, B., Stack, S., & Sánchez-Azofeifa, A. (2019). Replication Data for: Lianas Abundance is Positively Related with the Avian Acoustic Community in Tropical Dry Forests.

Hilje, B., Stack, S., & Sánchez-Azofeifa, A. (2017). Lianas Abundance is Positively Related with the Avian Acoustic Community in Tropical Dry Forests. *Forests*, 8(9), 311.

Allen, P. E., Barquero, M. D., Bermúdez, E., Calderón, J. C., **Hilje, B.**, Pineda, W., ... & Chacón-Madrigal, E. (2017). Calling for more accurate information in aquarium trade: analysis of live-fish import permits in Costa Rica. *Management of Biological Invasions*, 8(4), 533-542.

Barquero, M. D., & **Hilje, B.** (2017). Is mating in the Túngara Frog (*Engystomops pustulosus*: Leptodactylidae) random or non-random. *Mesoamerican Herpetology*, 4(2), 382-388.

Hudson, L. N., **Hilje, B.**, et al. (2017). The database of the PREDICTS (Projecting Responses of Ecological Diversity In Changing Terrestrial Systems) project. *Ecology and Evolution*, 7(1),145-188.

Hilje, B. & Sánchez, N. V. (2015). *Incilius melanochlorus* and *Craugastor mimus*. Body gigantism. *Mesoamerican Herpetology*, 2(3), 330-332.

Hilje, B., Calvo-Alvarado, J., Jiménez-Rodríguez, C. D., & Sánchez-Azofeifa, A. (2015). Tree species composition, breeding systems, and pollination and dispersion syndromes in three forest successional stages in a tropical dry forest in Mesoamerica. *Tropical Conservation Science*, 8(1), 76-94.

Vázquez, B., & **Hilje, B.** (2015). How habitat type, sex, and body region influence predatory attacks on *Norops* lizards in a pre-montane wet forest in Costa Rica: an approach using clay models. *Herpetology Notes*, 8, 205-212.

Hudson, L. N.,... **Hilje, B.**, et al. (2014). The PREDICTS database: a global database of how local terrestrial biodiversity responds to human impacts. *Ecology and Evolution*, 4(24), 4701-4735.

Lopezaraiza-Mikel, M.,...**Hilje, B.**, et al. (2013). Chapter 7: Phenological patterns of tropical dry forest along latitudinal and successional gradients in the Neotropics. In: Sánchez-Azofeifa, G.A. and Powers J. (Eds.). *Tropical Dry Forests in the Americas: Ecology, Conservation and Management*. CRC Press. Pp: 101-128.

Rodríguez-Brenes, S., **Hilje, B.**, & Sánchez, C. (2013). Reproductive behavior of *Anotheca spinosa* (Anura: Hylidae) under natural conditions in Costa Rica. *Herpetological Review*, 44(1), 50-52.

Hilje, B., & Aide, T. M. (2012). Recovery of amphibian species richness and composition in a chronosequence of secondary forests in northeastern Costa Rica. *Biological Conservation*, 146(1),170-176.

Hilje, B., & Aide, T. M. (2012). Calling activity of the common tink frog (*Diasporus diastema*) (Eleutherodactylidae) in secondary forests of the Caribbean of Costa Rica. *Tropical Conservation Science*, 5(1), 25-37.

Hilje, B., & Arévalo-Huezo, E. (2012). Aestivation in the Cane Toad *Rhinella marina* Linnaeus, 1758 (Anura, Bufonidae) during the peak of a dry season in a tropical dry forest, Costa Rica. *Herpetology Notes*, 5, 533-534.

García-Rodríguez, A., **Hilje, B.**, & Bolaños, F. (2012). Anfibios de las Áreas de Importancia para la Conservación de las Aves en Costa Rica. In: Áreas Importantes para la Conservación de las Aves en Costa Rica. Sandoval, L., & Sánchez, C. (eds.) Unión de Ornitólogos de Costa Rica.

Hilje, B., & Yglesias, M. (2011). Aggressive nocturnal behavior in the strawberry poison frog *Oophaga pumilio* (Schmidt, 1857) (Dendrobatidae). *Herpetotropicos*, 5, 105-106.

Hilje, B. (2010). *Oophaga pumilio* (poison dart frog) nocturnal activity. *Herpetological Review*, 41, 65.

Hilje, B., & Yglesias, M. (2010). *Dendropsophus microcephalus* (yellow cricket tree frog) behavior. *Herpetological Review*, 41, 62-63.

Hilje, B., & Yglesias, M. (2009). *Helminthophis frontalis* (Northern Antsnake). Feeding behavior. *Herpetological Review*, 40, 355-356.

Barrantes, G., Sánchez, C., **Hilje, B.**, & Jaffé, R. (2008). Male Song Variation of Green Violet-Ear (*Colibri thalassinus*) in the Talamanca Mountain Range, Costa Rica. *The Wilson Journal of Ornithology*. *The Wilson Journal of Ornithology*, 120(3), 519-524.

Barquero, M. D., & **Hilje, B.** (2005). House wren preys on introduced gecko in Costa Rica. *Wilson Bulletin*, 117(2), 204-205.

Hilje, B., Barquero, M. D., & Saborío, G. (2002). *Physalaemus pustulosus* (Tungara Frog). Displacement of amplectant males. *Herpetological Review*, 33(3), 198

Leadership

Corredor Biológico San Juan-La Selva, Sarapiquí, Heredia, Costa Rica, Vice-President 2019-2020.

Conservation and Biodiversity Assessment Association, Costa Rica (ACEBIO), current Vice-President

Languages

Spanish (Native speaker)

English (Advanced reading, speaking, and writing)

Portuguese (Basic reading)

Professional References

Dr. Johel Chaves-Campos
Professor, Verto Education, Costa Rica
E-mail address: johelchaves@gmail.com

Dr. T. Mitchell Aide
Professor, University of Puerto Rico at Rio Piedras (UPR-RP), Department of Biology
E-mail address: tmaide@yahoo.com

Dr. Julio Calvo Alvarado
Former President
Tecnológico de Costa Rica
E-mail address: jcesar.calvo@gmail.com