CURRICULUM VITAE JOHEL CHAVES

(Johel Chaves-Campos for academic purposes)

Current position: Faculty of Biology and Environmental Science, Verto Education, CATIE, Turrialba, Costa Rica
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EDUCATION

2003-2008 Ph.D., Purdue University, Department of Biological Sciences, W. Lafayette, Indiana, USA.
Dissertation: Benefits of cooperative food search in the maintenance of group living in ocellated antbirds.

1999-2001 M.S. Biology with emphasis in Zoology (with honors), University of Costa Rica, Biology School, San José, Costa Rica. Thesis: Altitudinal movements of large frugivorous birds on the Caribbean slope of Costa Rica.

1993-1998 B.S. Biology with emphasis in Zoology. University of Costa Rica, Biology School, San José, Costa Rica.

Teaching Credentials

November 2021 **ACUE Microcredential in Promoting Active Learning**
Association of College and University Educators.

ACADEMIC EXPERIENCE

Since August 2021-

Faculty of Biology and Environmental Science
Verto Education, Costa Rica
Activities: Designed, developed, implemented, and taught the courses Environmental Science and Introduction to Ecology. Designed and developed the course Introductory Biology, including its laboratory. Designed the renovation plan for the physical space assigned to the Introductory Biology Laboratory. Identified, sourced, and quoted all the reagents and equipment required to run the Introductory Biology Laboratory.

August 2019-August 2021

Lead Instructor
Council on International Educational Exchange,
Abroad Program in Tropical Ecology and Conservation in Costa Rica

Activities: I led a team of four academic staff (two faculty members, two teaching assistants, one logistics coordinator), managed the program budget, oversaw the program logistics, managed academic programming, managed course and faculty evaluations, interviewed candidates for academic positions, trained new faculty and teachings assistants, conducted student orientations, submitted clinic reports, and collected and reported grades from all course instructors to Academic Director.

August 2011- August 2021
Program Instructor
Council on International Educational Exchange,
Abroad Program in Tropical Ecology and Conservation in Costa Rica
Activities: I taught the courses Independent Study and Tropical Diversity twice a year.

2003-2008 **Doctoral Fellow / Teaching Assistant**
Department of Biological Sciences, Purdue University, West Lafayette, Indiana, USA.
Activities: I taught Ecology Lab (once, 20 students) and assisted the instructor of the course Introduction to Ecology and Evolution (once, ~130 students).

2005-2007 **Undergraduate Mentor**
US National Science Foundation-Organization for Tropical Studies Research Experience for Undergraduates, La Selva Biological Station, Costa Rica.
Activities: I mentored, trained and supervised Costa Rican and American undergraduates conducting summer research (3 programs, 4 students).

2002-2003 **Course Coordinator**
Organization for Tropical Studies, Costa Rica
Activities: I coordinated the field graduate course Tropical Biology and Conservation. I taught statistics during the program (1 program, 22 students).

2001-2003 **Assistant Instructor**
University of California (all campuses), Education Abroad Program in Biology, Costa Rica.
Activities: I mentored and supervised undergraduate students conducting independent research. I conducted workshops in ornithology, experimental design and statistics during the program (4 programs, ~100 students).

1997-2000 **Teaching Assistant**
Biology School, University of Costa Rica, San José, Costa Rica.
Activities: I taught the courses Ecology Lab (3 times, ~100 students), the Laf of Introduction to Costa Rican Flora (once, ~25 students), Tree taxonomy Lab (once, 15 students). Assisted the instructor of the course Field Biology (once, 15 students).

RESEARCH EXPERIENCE

August 2011- August 2021
Research Instructor
Council on International Educational Exchange,
Abroad Program in Tropical Ecology and Conservation in Costa Rica
Projects: Multiple projects, mostly focused on animal behavior, involving undergraduate students.

2017-2019 **Independent Investigator**

Project: consistency and plasticity of hermit crab behavior in disturbed areas. Activities: design and execution of research projects. Data analyses and publication of scientific articles.

Feb 2009 –
Jul 2011 **Postdoctoral Researcher**
Department of Biological Sciences, University of New Orleans, New Orleans, Louisiana, USA.
Project: Coevolutionary dynamics between predator and prey in the valley of Cuatro Ciénegas, Mexico. Activities: I am using molecular tools, geometric morphometrics, and stable isotope analysis to study coevolution between endemic fish and their invertebrate prey. I am also studying the phylogeography of these species in the process.

2003-2008 **Graduate Research Assistant**
Purdue University, Department of Biological Sciences, W. Lafayette, IN.
Project: Benefits of cooperative food search in the maintenance of group living in ocellated antbirds. Activities: I used molecular tools, radiotelemetry, playback experiments, and geographic information systems to study social interactions in ocellated antbirds in Costa Rica (PhD dissertation).

1999-2001 **Graduate Research Assistant**
Biology School, University of Costa Rica, San José, Costa Rica
Activities: I measured temporal abundance of canopy fruit-eating birds and canopy fruits along an elevational gradient in Costa Rica with the help of radio telemetry (MS thesis).

1999-2000 **Research Intern**
La Selva Biological Station, Organization for Tropical Studies, Costa Rica
Activities: I studied army-ant-following behavior in birds using playback experiments (OTS post-course fellowship).

1996-1997 **Research Trainee**
Cabo Blanco Absolute Natural Reserve, Costa Rica.
Activities: I measured nest site selection in brown boobies (University of Costa Rica independent undergrad research project).

1996-2000 **Undergraduate and Graduate Research Assistant**
Zoology Museum, University of Costa Rica
Activities: I collected, identified and preserved birds and fishes. Conducted morphological analysis, created a database for the ornithological collection, and compiled the historical records for the first Official List of the Birds of Costa Rica.

PUBLICATIONS

REFEREED *(* undergraduate student at the time data collection ended*)

Simon, S.*, Chai, K*., Drescher, M*, and **J. Chaves-Campos**. 2022. Bacteria associated with leaf-cutter ants drive natural antibiotic resistance in soil bacteria. **Journal of Tropical Ecology**. Published Online First on July 18 2022 doi:10.1017/S0266467422000323

Henderson, E.C.*, Osborne, Z.K*, and **J**. **Chaves-Campos.** 2022. Hummingbird bill morphology matched flower morphology when long-corolla flowers provided higher reward. **Wilson Journal of Ornithology 134: 236–250.**

Serpell, E. *, and **J**. **Chaves-Campos.** 2022. Memory and habituation to harmful and non-harmful stimuli in a field population of the sensitive plant, *Mimosa pudica*. **Journal of Tropical Ecology** 38:89-98.

Daniel, A.*, and **J**. **Chaves-Campos.** 2021. Contrary to vertebrates, less aggressive and more consistent individuals are common in disturbed habitats in the colonial spider *Metabus gravidus* (Araneae: Araneidae). **Behaviour** 158:225-248.

Finger, C.*, and **J**. **Chaves-Campos** 2020. Trail gradient influences load size in wild leaf cutter ants. **Journal of Insect Behavior** 33:7–13.

Frank, T.M.*, Gabbert, W.C.*, **Chaves-Campos, J**. and R.K. LaVal. 2019. Impact of artificial lights on foraging of insectivorous bats in a Costa Rican cloud forest. **Journal of Tropical Ecology** 35:8-17.

Cummings, M*., Evans, H.K.*, and **J. Chaves-Campos**. 2018. Male horn dimorphism and its function in the Neotropical dung beetle *Sulcophanaeus velutinus*. **Journal of Insect Behavior** 31:471-489.

Hewes, M.E., and **J. Chaves-Campos**. 2018. Boldness related to size in the hermit crab *Coenobita compressus* at undisturbed, but not disturbed beach. **Ethology** 124:570-578.

Hewes, M.E.*, K. Delventhal*, and **J. Chaves-Campos**. 2017. Behavioral plasticity and consistency in the naked-footed mouse (*Peromyscus nudipes*) with habitat disturbance. **Journal of Ethology** 35:279–292.

Freeman, B.M.* and **J. Chaves-Campos**. 2016. Branch Width and Height Influence the Incorporation of Branches into Foraging Trails and Travel Speed in Leafcutter Ants *Atta cephalotes* (L.) (Hymenoptera: Formicidae). **Neotropical Entomology** 45: 258-264.

Coghill, L.M., C.D. Hulsey, J. Chaves-Campos, F. J. García de León, and S.G. Johnson. 2014. Next generation phylogeography of cave and surface *Astyanax mexicanus*. **Molecular Phylogenetics and Evolution** 79: 368–374.

Coghill, L.M., C.D. Hulsey, **J. Chaves-Campos**, F. J. García de León, and S.G. Johnson. 2013. Phylogeography and Conservation Genetics of a Distinct Lineage of Sunfish in the Cuatro Ciénegas Valley of Mexico. **PLoS ONE** 8(10): e77013.

Chaves-Campos, J., L.M. Coghill, M. A. Al-Salamah*, T. J. DeWitt and S.G. Johnson. 2012. Field heritabilities and lack of correlation of snail shell form and antipredator function estimated using Bayesian and maximum likelihood methods. **Evolutionary Ecology Research** 14: 743–755.

Chaves-Campos, J., L.M. Coghill, F. J. García de León, and S.G. Johnson. 2012. The effect of aquatic plant abundance on shell crushing resistance in a freshwater snail. **PLoS ONE** 7(9): e44374.

Chaves-Campos, J., S.G. Johnson, and C.D. Hulsey. 2011. Spatial mosaic of antagonistic traits and gene flow in an aquatic predator-prey system. **PLoS ONE** 6(7): e22472.

Califano, D*. and **J. Chaves-Campos**. 2011. Effect of trail pheromones and weather on the moving behaviour of the army ant *Eciton burchellii*. **Insectes Sociaux** 58: 309-315.

Chaves-Campos J. 2011. Ant colony tracking in the obligate army ant-following antbird *Phaenostictus mcleannani*. **Journal of Ornithology** 152: 497-504.

Chaves-Campos, J., S.G. Johnson, F. J. García de León, and C.D. Hulsey. 2011. Phylogeography, genetic structure, and gene flow in the endemic freshwater shrimp *Palaemonetes suttkusi* from Cuatro Ciénegas, Mexico. **Conservation Genetics** 12: 557-567.

Coghill, L.M, **J. Chaves-Campos**, F.E. Espinoza*, S.L. Lance, T.C. Glenn, and S. G. Johnson. 2011. Microsatellite markers isolated from the Mexican banded spring snail *Mexipyrgus churinceanus*. **Conservation Genetic Resources** 3:29–31.

Araya-Ajoy Y., **J. Chaves-Campos**, E.K.V. Kalko, and J. A. DeWoody. 2009. High-pitched notes signal genetic diversity during vocal contests in ocellated antbirds. **PLoS ONE** 4(12): e8137.

Chaves-Campos J., Y. Araya-Ajoy, C. A. Lizana-Moreno* and K. N. Rabenold. 2009. The effect of local dominance and reciprocal tolerance on feeding aggregations of ocellated antbirds. **Proceedings of the Royal Society B**. 276: 3995-4001

Class A.M.* and **J. Chaves-Campos**. 2009. Additional notes on the nest location and parental care of ocellated antbirds (*Phaenostictus mcleannani*). **Ornitología Neotropical** 20: 445–459.

Turner S.M., **J. Chaves-Campos** and J. A. DeWoody. 2009. Early embryo survivorship and the maintenance of major histocompatibility polymorphism in Atlantic salmon (*Salmo salar*). **Genetica** 137:99-109.

Chaves-Campos J. and J. A. DeWoody 2008. The spatial distribution of avian relatives: do obligate army-ant-following birds roost and feed near family members? **Molecular Ecology** 17:2963-2974.

Vidal-Riggs J.M.* and **J. Chaves-Campos** 2008. Method review: Estimation of colony densities of the army ant *Eciton burchellii*. **Biotropica** 40:259-262.

Chaves-Campos J. 2005. Bare-necked Umbrellabird (*Cephalopterus glabricollis*) foraging at an unusually large assemblage of army ant-following birds. **Wilson Bulletin** 117:418-420.

Chaves-Campos, J. 2004. Elevational movements of large frugivorous birds and temporal variation in abundance of fruits along an elevational gradient. **Ornitología Neotropical** 15:433-445.

Chaves-Campos, J., J. E. Arévalo, and M. Araya. 2003. Altitudinal movements and conservation of the Bare-necked Umbrellabird (*Cephalopterus glabricollis*) of the Tilarán Mountains, Costa Rica. **Bird Conservation International** *13:45-58.*

Chaves-Campos, J. 2003. Localization of army-ant swarms by ant-following birds on the Caribbean slope of Costa Rica: following the vocalization of antbirds to find the swarms. **Ornitología Neotropical** 14:289-294.

Chaves-Campos, J. 2003. Changes in abundance of Crested Guan (*Penelope purpurascens*) and Black Guan (*Chamaepetes unicolor*) along an altitudinal gradient in Costa Rica. **Ornitología Neotropical** 14:195-200.

Chaves-Campos, J.* and J. Torres*. 2002. Distribution of nests of the Brown Booby (*Sula leucogaster*) in relation to the inclination of terrain. **Ornitología Neotropical** 13: 205-208.

BOOK CHAPTERS

Barrantes, G. and **J. Chaves-Campos.** 2008. Birds in coastal and marine environments. Pp 469-478. *In* Wehrtmann, I. S. and J. Cortés (eds.), Marine Biodiversity of Costa Rica, Central America. Monographiae Biologicae Vol 86. Springer Verlag, Berlin.

Chaves-Campos, J., G. Barrantes, and A. Pereira. 2005. Pp. 215– 228. In, J. Lobo and F. Bolaños (eds.). Natural History of Golfito, Costa Rica. National Institute of Biodiversity (INBio), Heredia, Costa Rica.

Barrantes, G. and J. **Chaves-Campos**. 2003. Avian biodiversity of Costa Rica. Pp. 165 - 178. In, R. Acuña-Mesén (ed.). Biodiversity. Editorial Universidad de Costa Rica, San José, Costa Rica.