

Charlotte H. Chang, Ph.D. *NIMBioS Postdoctoral Fellow*

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Education

- 2012-2017 **Princeton University** (Princeton, NJ, USA)
Department of Ecology and Evolutionary Biology | Ph.D.
Advisors: Simon A. Levin & David S. Wilcove
- 2011 **University of Cambridge** (Cambridge, UK)
Department of Zoology | M.Phil.
- 2010 **Pomona College** (Claremont, CA, USA)
B.A. in Biology (*cum laude*), minor in Mathematics

Publications

- Chang, C.H.** and S.E. Drohan. Should I shoot or should I go? Simple rules for prey selection in multi-species hunting systems. 2018. *Ecological Applications*, **28**:1940–1947.
- Chang, C.H.**, M.J.L.F. Cruyff, and X. Giam. Examining conservation compliance with randomized response technique analyses. 2018. *Conservation Biology*, **32**:1448–1456.
- Chang, C.H.**, K.K. Karanth, and P. Robbins. Birds and beans: Comparing avian richness and endemism in *arabica* and *robusta* agroforests in India's Western Ghats. 2018. *Scientific Reports*, **8**:3143.
- Chang, C.H.**, M. Barnes, M. Frye, M. Zhang, R. Quan, L. Reisman, S.A. Levin, and D.S. Wilcove. 2017. The pleasure of pursuit: recreational hunters in Southwest China exhibit low exit rates in response to declining catch. *Ecology and Society*, **22**(1):43.
- Zhang, M.X., **C.H. Chang**, and R. Quan. 2017. Natural Forest at Landscape Scale is Most Important for Bird Conservation in Rubber Plantation. *Biological Conservation*. **210**(A):243–252.
- Ochoa-Quintero, J.M., **C.H. Chang**, T.A. Gardner, M.R. Messias, W.J. Sutherland, and F.A.C. Delben. 2017. Habitat loss on Rondon's marmoset potential distribution. *Land*. **6**(1):8.
- Morgens, D.W., **C. Chang**, and A.R.O. Cavalcanti. 2013. Ambushing the Ambush Hypothesis: predicting and evaluating off-frame codon frequencies in Prokaryotic Genomes. *BMC Genomics*. **14**:418.
- Sutherland, W. J., J.A. Alves, T. Amano, **C.H. Chang**, *et al.* 2012. A horizon scanning assessment of current and potential future threats to migratory shorebirds. *Ibis*. **154**:663–679.
- Kaspari, M., **C. Chang**, and J. Weaver. 2010. Salted roads and sodium limitation in a northern forest ant community. *Ecological Entomology*. **35**:543–548.

Manuscripts in preparation & revision

- Chang, C.H.**, S.J. Williams, M. Zhang, S.A. Levin, D.S. Wilcove, and R.C. Quan. Perceived entertainment and recreational value motivate illegal hunting in Southwest China. *Biological Conservation*, In Revision.
- Chang, C.H.** and D.W. Yu. Inferring catch sustainability from hunter bags. *Submitted*.
- Albers, H.J, **C.H. Chang**, K. Kroetz, *et al.*. Reserve Site Selection with Enforcement Costs and Illegal Harvest. *In prep.*
- De Angeli, K.I., E. Abbasi, A. Gan, X. Giam, and **C.H. Chang**. Modeling hunting and harvesting interactions between plants and their seed dispersers. *In prep.*

Presentations

- Chang, C.H.**, K.K. Karanth, M.X. Zhang. (2018) Ecological impacts and institutional differences between agroforests in tropical Asia (Western Ghats, India and Xishuangbanna, China) Ecological Society of America. (New Orleans, USA).
- Albers, H.J., **C.H. Chang**, K. Kroetz, *et al.* (2018) Reserve Site Selection with Enforcement Costs and Illegal Harvest. 6th World Congress of Environmental and Resource Economists. (Gothenburg, Sweden)
- Chang, C.H.** (2017) Harvest pressure shadows set body size limits under indiscriminate harvest. Association for Tropical Biology and Conservation. (Mérida, Mexico).
- Chang, C.H.** (2016) Symposium S01: Socio-ecological Synthesis: Methods to Address Conservation Issues (*Symposium co-organizer with Dr. Janice Ser Huay Lee*). Association for Tropical Biology and Conservation and Society for Conservation Biology. (Singapore).

Grants and Awards

2018	US National Science Foundation (NSF) Extreme Science and Engineering Discovery Environment (XSEDE) Start-Up Allocation
2017	National Institute for Mathematical and Biological Synthesis Postdoctoral Fellowship
2016	IUCN Critical Ecosystem Partnership Fund
2015	NSF Doctoral Dissertation Improvement Grant NSF GROW with USAID research fellowship NSF East Asia Pacific Summer Institute grant (declined) Fish and Wildlife Foundation Women Scientists in Conservation Biology The Explorers Club Exploration Fund Grant
2014	Princeton University Center for Health and Wellbeing Research Grant
2013	Burnand-Partridge Foundation Research Grant (2013-2015)
2012	NSF Graduate Research Fellowship
2011	Fulbright Fellowship (Fudan University, Shanghai, China) China Scholarship Council
2010	Downing Scholarship at the University of Cambridge Phi Beta Kappa, Gamma chapter; Sigma Xi at Pomona College

Teaching & Mentoring

Big Orange STEM Saturday (2019)	Public outreach and STEM education focused on natural language processing (<i>Finding Patterns in Language</i>).
EEB 504-002: Scientific Computing for Biologists, <i>Instructor of Record</i> (UTK, 2018, https://github.com/EEB504)	I developed the materials and taught a course for senior undergraduates and graduate students focused on version control, web development, reproducible data management, and Random Forest machine learning models.

NIMBioS Summer Research Experience for Undergraduates

I mentored three undergraduates in an independent research project developing visualization and sensitivity analysis tools for tropical managers facing plant and animal co-harvesting.

Introduction to R and RStudio, *Course developer and instructor*, (Chinese Academy of Sciences (CAS), 2018)

This short-course for Laotian and Chinese scientists was a capacity-building exercise as part of my co-PI IUCN CEPF grant.

Princeton University McGraw Center for Teaching and Learning (2017)

Completion of the **Teaching Transcript Program** which promotes best practices in educational pedagogy and course development.

Senior Thesis Mentor (2017)

I mentored an undergraduate senior thesis project that combined fieldwork in Xishuangbanna, China with empirical analyses of local support for land conservation based on socio-economic vulnerability.

Programming and Statistics Short-Course, *Course developer and instructor*, (CAS, 2016)

Introductory course on programming in R, data exploration, and regression modeling.

ENV 201: Introduction to Environmental Sciences, *Teaching Assistant* (Princeton University, 2014)

Survey course covering geochemistry, ecology, and civil & environmental engineering emphasizing conservation policy. Lecture and discussion sections.

EEB 211: Introduction to Ecology, *Teaching Assistant* (Princeton University, 2013)

Introductory course on evolutionary and ecological principles with laboratory projects.

Skills & Service

Computational methods: R, python, QGIS, ArcGIS, Mathematica, Matlab, Perl, \LaTeX

Languages: Mandarin Chinese (professional working proficiency), French (limited proficiency)

Students Mentored: Eeman Abbasi, Kevin Ignacio De Angeli, and Alan Gan (NIMBioS REU, 2018); Yun-Yun Li, Alana Reynolds, Fida Newaj (Princeton 2016-2017); Liping Zhou (Chinese Academy of Sciences)

Service: Amachi Mentoring Program, Knoxville Leadership Foundation (Current); Pipeline for Women in STEM mentor, UTK (Current); ReMatch Graduate Student mentor, Princeton University (2016-2017); Environmental Officer, Downing College, University of Cambridge (2010-2011); Saturday Tongan Education Program, Co-Founder (2009-2010); Asian American Mentor Program, Head Mentor (2009-2010)

Reviewer for: *Biological Conservation*, *Conservation Biology*, *Conservation Letters*, *Ibis*, *Frontiers in Ecology & Evolution*, *Natural Resource Modeling*, *People and Nature*