

LUKE JAMES EVANS

University of Florida, Gainesville, FL
Wildlife Ecology and Conservation

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Gainesville, FL
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EMPLOYMENT

Feb 2025 – Present

Postdoctoral Researcher – USGS/University of Florida

Florida Cooperative Fish and Wildlife Research Unit

PI – Dr Conor McGowan

Working to protect vital shorebird nesting and migratory habitat through public closure of discrete high impact zones throughout Florida. Utilizing a decision analytic approach to assess areas such as Fort Desoto County Park that can maximise impact with minimal public distraction. Working to assess how translocation efforts of the American crocodile impact population viability.

Jan 2021 – Feb 2025

Postdoctoral Researcher - University of Florida

Wildlife Ecology and Conservation

PIs – Dr. Brett Scheffers & Dr. Christina Romagosa

Quantifying and determining the invasive species risk posed by the exotic pet trade. Developing tools with remote sensing interfaces for both State and Federal partners to combat invasive species introductions and spread both in the Everglades and across Florida. Engaging diverse experts to validate decision support tools.

Jan 2019 – Dec 2020

Postdoctoral Researcher - Arizona State University

Center for Global Discovery and Conservation Science

PI – Dr. Greg Asner

Utilizing varied types of remote sensing data to understand the effects of human-mediated change on tropical and sub-tropical ecosystems. Quantified the relative importance of floral and faunal biodiversity, spatial ecology, and population dynamics. A large amount of my work focused on elephant populations and prioritization of metrics involved in conservation planning.

2017 – Jan 2019

Postdoctoral Researcher – Stanford University - Carnegie Institution for Science

Department of Global Ecology

PI – Dr. Greg Asner

Quantifying drivers of animal movement and occupancy with remote sensing datasets. Utilizing high-resolution habitat datasets such as LiDAR imagery to understand and conserve endangered species throughout Sabah. Working under a Rainforest Trust project charged with the creation of a new 400k hectare protected area within the State. Field work included ground validation of remote sensing datasets across different habitats.

2018 – Jan 2019

Technical Manager, Research and Conservation, Malaysia

Danau Girang Field Centre / Sabah Wildlife Department

Providing technical assistance, statistical teaching and supervision, as well as project guidance to students and staff of the Danau Girang Field Centre. This included supervision of two PhD students, three masters students, and a range of undergraduate students. The position included training in the handling of remote sensing data and associated analyses. Guiding the research and conservation focus of the Danau Gurang Field Centre.

2016 – 2018

Crocodile Conservation Manager, Malaysia

Danau Girang Field Centre / Sabah Wildlife Department

Working at the interface between NGO and governmental conservation and management strategy. Overseeing state-wide surveys of estuarine crocodiles to determine status of populations within Sabah's major river systems. We modelled the impacts of a range of harvest scenarios. Assessment determined the population's current status and trends, both key components in the identification of non-detriment findings under CITES. This project resulted in the halting of harvest in some river systems and a decrease in harvest in all other major rivers.

EDUCATION

2012 – 2016 - Cardiff School of Biosciences, Cardiff University, UK.

Doctorate of Philosophy (Ph.D)

Supervisors – Prof. Benoit Goossens; Dr. Hefin Jones

*Assessing the impacts of habitat fragmentation and subsequent anthropogenic expansion on the behavioural, nesting and population ecology of the estuarine crocodile, *Crocodylus porosus*.*

Examining the effects of human-crocodile conflict. Focusing on quantifying movement, nesting ecology, and population genetics of apex predator in Sabah, Malaysian Borneo. My work involved significant/marked public interface, working in heightened emotional environments, and providing actionable research to prevent fatalities.

2010 – 2011 - Cardiff School of Biosciences, Cardiff University, UK.

Masters of Research (MRes)

Supervisor – Prof. Benoit Goossens

*Population ecology of the estuarine crocodile (*Crocodylus porosus*) in the lower Kinabatangan River, Sabah.*

Masters-level research across the spectrum of biosciences (molecular biosciences, neuroscience, biomedicine, and organisms and environment). Research project examined population dynamics and habitat partitioning of crocodile size classes in Sabah, Malaysia.

2007 – 2010 - Cardiff School of Biosciences, Cardiff University, UK.

BSc Biology

RESEARCH INTERESTS

- Quantitative ecology
- Science-policy interface
- Remote sensing
- Conservation biology
- Field work
- Solutions-based science
- Conservation planning and management
- Decision support

WHITE PAPERS AND DECISION SUPPORT TOOLS

My research focuses on designing actionable science, and applies a range of tools and modeling strategies to active population management and species conservation.

1. **Evans, L. J.**, Romagosa, C. R., IN DEVELOPMENT. Climate adaptation considerations in invasion risk development. Invasion risk decision support tool. Florida Fish and Wildlife Conservation Commission (FWC).
2. **Evans, L. J.**, Romagosa, C. R. 2023. Invasion risk decision support tool. Florida Fish and Wildlife Conservation Commission (FWC). IMPLEMENTED.
3. Figueroa, A. **Evans, L. J.**, Daniel, W., Romagosa, C. R. 2024. Everglades restoration invasion support tool. Office of Everglades Restoration Initiatives (OERI) – Department of the Interior. IMPLEMENTED.
4. **Evans, L. J.**, Baecher, A., Cullen, J., Scheffers, B. R., 2022. Climate futures of current and potential invasives in the Southeast USA. Southeast Climate Adaptation Science Center (SECASC). IMPLEMENTED.
5. **Evans, L. J.**, Kntayya, S. K., Goossens, B. R. 2021. Statewide crocodile population modeling. Sabah, Malaysia State Government. IMPLEMENTED.

STATE MANAGEMENT PLANS - SABAH, MALAYSIA

Member of a diverse team charged with drafting state-wide action plans for key imperiled species; all of these plans have been ratified by the state government.

1. Proboscis monkey – IUCN Red List – Endangered
2. Bornean banteng – IUCN Red List - Critically endangered
3. Sunda clouded leopard – IUCN Red List – Vulnerable
4. Estuarine crocodile – IUCN Red List – Least concern

PUBLICATIONS

*denotes joint first author

1. Fredstone, A.*, Tingley, M.*, Neate-Clegg M., **Evans, L. J.**, Scheffers, B., (**IN PRESS – TRENDS IN ECOLOGY AND EVOLUTION**). Reimagining species on the move across space and time. *Manuscript Available*.
2. **Evans, L. J.***, Brodrick, P. G.*, Martin, R. E., Chadwick, K. D., Vaughn, N. R., Heckler, J. W., Knapp, D. E., Asner, G. P. (**UNDER REVIEW – JOURNAL OF BIOGEOGRAPHY**). Strategic conservation: integrating forest carbon and biodiversity protection.. *Manuscript Available*.
3. **Evans, L. J.**, Baecher, J. A., Cullen, J., Daniel, W., Baranowski, B., Scheffers, B. R. (**IN PREP**). Combining expert elicitation and modelling to enhance invasive species management. *Draft Available*.
4. Baecher, J.A., Klimes, D.H., **Evans, L.J.**, Romagosa, C.M., Fletcher Jr., R.J., Scheffers, B.R. (**IN PREP**). Jointly evaluating management, climate, and land use shows diffuse spread of an invading predatory snake. *Draft Available*.
5. **Evans, L. J.**, Orozco-terWengel P., Gardner, P. C., Goossens, B., Reynolds, G, Asner, G. P. (**IN PREP**). Predicting deforestation risk and the road to real-time monitoring. *Draft Available*.
6. **Evans, L. J.**, Asner, G. P. (**IN PREP**). Carbon and biodiversity in real-world protected area management. *Draft Available*.
7. **Evans, L. J.**, Baecher, J. A., Scheffers, B. R. (2024). Invasive risk posed by the pet trade. *Frontiers in Ecology and the Environment*. e2825.

8. Klinges, D. H., Baecher, J. A., Lembrechts, J. J., Maclean, I. M., Lenoir, J., Greiser, C., Ashcroft, M., **Evans, L. J.**, ... Scheffers, B. R. (2024). Proximal microclimate: Moving beyond spatiotemporal resolution improves ecological predictions. *Global Ecology and Biogeography*, 33(9), e13884.
9. Carlson, R. R., **Evans, L. J.**, Foo, S. A., Grady, B. W., Li, J., Seeley, M., ... Asner, G. P. (2021). Synergistic benefits of conserving land-sea ecosystems. *Global Ecology and Conservation*, 28, e01684.
10. Williams, S. et al. (2020). Incorporating connectivity into conservation planning for the optimal representation of multiple species and ecosystem services. *Conservation Biology*, 34(4), 934-942.
11. **Evans, L. J.**, Goossens, B., Davies, A. B., Reynolds, G., Asner, G. P. (2020). Natural and anthropogenic drivers of Bornean elephant movement strategies. *Global Ecology and Conservation*, 22, e00906.
12. **Evans, L. J.**, Asner, G. P., & Goossens, B. (2018). Protected area management priorities crucial for the future of Bornean elephants. *Biological Conservation*, 221, 365-373.
13. Love, K., Kurz, D. J., Vaughan, I. P., Ke, A., **Evans, L. J.**, & Goossens, B. (2018). Bearded pig (*Sus barbatus*) utilisation of a fragmented forest–oil palm landscape in Sabah, Malaysian Borneo. *Wildlife Research*, 44(8), 603-612.
14. Asner, G. P., et al. (2018). Mapped aboveground carbon stocks to advance forest conservation and recovery in Malaysian Borneo. *Biological Conservation*, 217, 289-310.
15. Stark, D. J., Vaughan, I. P., **Evans, L. J.**, Kler, H., & Goossens, B. (2018). Combining drones and satellite tracking as an effective tool for informing policy change in riparian habitats: a proboscis monkey case study. *Remote Sensing in Ecology and Conservation*, 4(1), 44-52.
16. **Evans, L. J.**, Goossens, B., & Asner, G. P. (2017). Underproductive agriculture aids connectivity in tropical forests. *Forest Ecology and Management*, 401, 159-165.
17. **Evans, L. J.**, Davies, A. B., Goossens, B., & Asner, G. P. (2017). Riparian vegetation structure and the hunting behavior of adult estuarine crocodiles. *PloS ONE*, 12(10), e0184804.
18. **Evans, L. J.**, Jones, T. H., Pang, K., Saimin, S., & Goossens, B. (2016). Spatial ecology of estuarine crocodile (*Crocodylus porosus*) nesting in a fragmented landscape. *Sensors*, 16(9), 1527.
19. **Evans, L. J.**, Jones, T. H., Pang, K., Evans, M. N., Saimin, S., & Goossens, B. (2015). Use of drone technology as a tool for behavioral research: a case study of crocodilian nesting. *Herpetological Conservation and Biology*, 10(June), 90-98.
20. Miller, J., et al., 2014. Dispatch from the field: ecology of ground-web-building spiders with description of new species (Araneae, Symphytognathidae). *Biodiversity Data Journal*, 2,e1076.

PUBLISHED BOOKS

- Kaur-Kler, J., **Evans, L. J.**, Goossens, B. (2019). *Opogi: A Bornean crocodile*. Natural History Publications. Kota Kinabalu, Sabah, Malaysia.

SELECT CONFERENCE PRESENTATIONS

- **Evans, L. J.**, Baecher, J. A., Scheffers, B. R., 2024. An integrative approach for robust invasive species risk assessments. UF Invasion Science Center Conference.
- **Evans, L. J.**, Figueroa, A., Romagosa, C. R., 2024. The use of R shiny in the development of risk tools. University of Florida invasive species risk determination workshop. Expert elicitation workshop.
- **Evans, L. J.**, Baecher, J. A., Scheffers, B. R., 2023. Invasion risk posed by the pet trade. Species on the Move Conference.
- **Evans, L. J.**, Baecher, J. A., Scheffers, B. R., 2023. Invasion risk posed by the pet trade. North American Invasion Species Management Association (NAISMA) Conference.

- **Evans, L. J.**, Baecher, J. A., Scheffers, B. R., 2022. Climate adaptation of invasive species.
- **Evans, L. J.** & Asner G. P. 2018. LiDAR and its utilization in the maintenance of Bornean elephant populations. Heart of Borneo Conference. Kota Kinabalu, Sabah, Malaysia.
- **Evans, L. J.** & Asner G. P. 2017. LiDAR and its application for biodiversity mapping in Sabah. South East Asia Rainforest Research Partnership. Cambridge, UK.
- **Evans, L. J.**, Jones, H., Pang, K., Evans, M. N., Saimin, S., Goossens, B. 2014. Drone technology, a tool for behavioural research; a case study of crocodilian nesting. Borneo Crocodile Forum. Sibul, Sarawak, Malaysia.
- **Evans, L. J.**, Bolongon, G. G., Hearn, A. J., Ambu, L. N., Goossens, B. 2014. Technological successes in the Lower Kinabatangan Wildlife Sanctuary. Society for Conservation Biology – Asia 2014. Melacca, Malaysia.
- Goossens, B., **Evans, L. J.**, Guharajan, R., Harris, M., Hearn, A., Liaw, L.P., Othman, N., Guerrero-Sanchez, S., Stark, D. 2014. Wildlife responses to habitat fragmentation and degradation in the Kinabatangan landscape. Presented at Workshop on Kinabatangan Biodiversity Conservation. Batu Putih, Sabah, Malaysia.
- Goossens, B., **Evans, L. J.**, Guharajan, R., Harris, M., Hearn, A., Liaw, L.P., Othman, N., Guerrero-Sanchez, S., Stark, D. 2014. Wildlife responses to habitat fragmentation and degradation in the Kinabatangan landscape. Presented at Third Country Training Programme 2014: Integrated Biodiversity and Ecosystem Management Training Course. Sandakan, Sabah, Malaysia.
- Goossens, B., **Evans, L. J.**, Guharajan, R., Harris, M., Hearn, A., Liaw, L.P., Othman, N., Guerrero-Sanchez, S., Stark, D. 2014. Wildlife responses to habitat fragmentation and degradation in the Kinabatangan landscape. Presented at Regional Conference on Protected Area and Biodiversity Management in SEA, Kota Kinabalu, Sabah, Malaysia.
- **Evans, L. J.**, Rampangajouw, M., Dausip, J., Saimin, S., Goossens, B. 2012. Human-crocodile conflict: increasing understanding through satellite tracking, resource management and education. IUCN-SSC Crocodile Specialist Group Meeting. Manila, Philippines.

GRANTS

RESEARCH GRANTS

I have acquired grants of various sizes and from a range of sources, including governmental, NGO, and private enterprise totalling over USD\$700,000.

Florida Wildlife Conservation Commission (2024) (PI) – State Funding

- USD\$22,605

US Department of Interior (2023) (co-PI) – Federal Funding

- USD\$89,846

Florida Wildlife Conservation Commission (2022) (co-PI) – State Funding

- USD\$104,302

Columbus Zoo & Aquarium (2015 & 2016) (co-PI) – NGO

- USD\$3,000
- USD\$9,448

Chester Zoo (2012-2016) (co-PI) – NGO

- ~USD\$20,000 (GBP 12,000)

IUCN Crocodile Specialist Group (2016) (PI) – NGO

- USD\$1,000

Crocodile Population State Survey (2016-2019) (co-PI) – State Funding

- ~USD\$100,000 (ringgit Malaysia (RM)420,000)

Ocean Park (2016-2020) (Major Collaborator) – Private Enterprise

- ~USD\$400,000 (HK\$ 3,140,517)

Total = ~USD\$750,201

TEACHING & MENTORING EXPERIENCE

TEACHING INTERESTS

I am interested in teaching a range of topics, but have listed a few particular interests below:

Quantitative Ecology

Remote Sensing & Ecology

Field Techniques

Spatial Ecology

Climate Change

Field Courses (local and international)

Invasion Science

Conservation Biology

COURSE TEACHING

I have experience teaching a range of topics to students of varied educational levels, spanning elementary school to graduate participants.

Global change biology – UNDERGRADUATE - CARDIFF UNIVERSITY – Teaching Assistant

This involved teaching undergraduate students fundamentals of global change. Covering topics such as climate change, habitat loss, and urbanization.

Introduction to R – UNDERGRADUATE – CARDIFF UNIVERSITY – Co-instructor

This class familiarized students with the platform and took them through plotting and basic statistics.

Data handling and statistics – GRADUATE – CARDIFF UNIVERSITY/ECO-explore – Co-instructor

I have taught R at a graduate level where the class took students through mixed modelling approaches and multivariate analyses.

Remote sensing –UNDERGRADUATE– ARIZONA STATE UNIVERSITY – Guest lecturer

Wildlife specific guest lecture in a remote sensing class that taught the fundamentals of utilizing remote sensing in ecological contexts.

FIELD COURSE TEACHING & FIELD CENTER MANAGEMENT

I have lectured to over 80 field courses on a variety of topics including ecological theory, field techniques, and herpetology. These 8-12 field courses per annum, consisted of both undergraduate and graduate students. I simultaneously maintained a position of pastoral care for students and visitors at Danau Girang Field Centre. In addition to University-level groups I also taught a variety of school aged children from around the world, although with a focus on students from Malaysia and Singapore.

Field courses came from a wide variety of countries including (but not limited to):

United States:

University of Miami – Graduate Program
Oregon State University – Undergraduate
Portland State University – Undergraduate
University of La Verne – Undergraduate

United Kingdom:

Cardiff University – Undergraduate
University of South Wales – Undergraduate
Aberystwyth University – Undergraduate
Cornwall College – Undergraduate

China:

University of Hong Kong – Mixture of Undergraduate & Graduate

Netherlands:

Leiden University – Mixture of Undergraduate and Graduate

Germany:

Hannover University – Undergraduate

LABORATORY MENTORING

A range of laboratory-based undergraduate and masters-level mentoring and assessment experience.

Doctoral mentoring

Sai Kerisha Kntayya – PhD (2018-2024) - *Landscape Genetics and Habitat Viability of the Estuarine Crocodile (Crocodylus porosus) in Sabah: Conservation Management of an Apex Predator.*

Richard Burger – PhD (2016-2023) – Ecology of the Reticulated Python (*Malayopython reticulatus*): Life in an altered landscape.

Masters mentoring

Fraser Woodburn MS student (2018-2019) – *Density Dependent Growth Rates in Green Turtles Chelonia Mydas at Mantanani, Sabah, Malaysia.*

Timmy Garvey – MRes (Masters of Research) student (2015-2016) – *Basking Site Selection and Habitat Reutilisation in Crocodylus porosus in a Lowland Riparian Floodplain.*

Michelle Sexauer – MS student (2014-2015) - *Anthropogenic Disturbances Along the Kinabatangan River in Borneo, Malaysia and the Distribution and Abundance of the Saltwater Crocodile (Crocodylus porosus).*

Undergraduate mentoring

I advised in excess of 30 undergraduate students between 2012 and 2024, primarily providing statistical and field-based supervision.

Kieran Love (2014-2016) – *Bearded pig (Sus barbatus) utilisation of a fragmented forest–oil palm landscape in Sabah, Malaysian Borneo*. Resulted in a publication (Love et al. 2018)

WORKSHOPS ORGANIZED AND FACILITATED

March 2024

University of Florida Invasive Species Risk Determination Workshop

I co-organized a one-day workshop with over 60 participants. Provided a showcase of in-development risk tools. Additionally, I facilitated collection of calibration data from a diverse pool of stakeholders.

May 2022

Southeast Climate Adaptation Center Invasive Species Workshop

I co-organized a 25-participant workshop over two days. The workshop featured an interactive application using real-time data analysis and visualization functionality to facilitate workshop goals.

MEDIA OUTREACH AND ENGAGEMENT

I have experience engaging with media outlets; my work has been featured in a number of print and digital platforms.

- Local and international newspapers and online news sources (UK, US, and Mongabay)
- Global television productions, including Animal Planet production, The Amazon of the East, and Borneo Jungle Diaries (<http://bit.ly/2OFtO5T>).
- Local outreach engaging local schools and villages within Malaysia.

SEARCH COMMITTEE EXPERIENCE

Involvement in numerous search committees selecting undergraduates for placement years in Borneo. Reviewed CV and cover letters and conducted subsequent interviews.

PROFESSIONAL ACTIVITIES

PROFESSIONAL APPOINTMENTS

Regional Vice Chairman of the IUCN-SSC Crocodile Specialist Group (2015-Present)

Coordination of regional crocodile management activity. As a member of the steering committee, playing an active role in reviewing grant proposals.

REVIEWER EXPERIENCE

I have peer-reviewed for a wide range of journals, including:

Global Change Biology
Frontiers in Forests and Global Change
Frontiers in Ecology and Conservation
Conservation Science & Practice
Journal of Natural History

International Journal of Remote Sensing
Peer J
Journal of Herpetology
Nature Climate Change
Environmental Science and Ecology