Michael A. Pardo
K. Lisa Yang Center for Conservation Bioacoustics
Cornell Lab of Ornithology
map385@cornell.edu

CURRENT POSITION
Postdoctoral associate   1 Nov 2023-Present
K. Lisa Yang Center for Conservation Bioacoustics, Cornell Lab of Ornithology
Supervisor: Dr. Connor Wood

> PROJECT TITLE: Riparian biodiversity monitoring in Southern California

PREVIOUS POSITION
NSF postdoctoral research fellow in biology   1 Nov 2019 - 31 Oct 2023
Host institution: Colorado State University
Sponsoring scientist: Dr. George Wittemyer

> PROJECT TITLE: The function of vocal learning ability in African elephants

EDUCATION
Ph.D., Neurobiology and Behavior   15 August 2019
Cornell University
Advisors: Dr. Walter Koenig and Dr. Michael Webster

> DISSERTATION: Vocal recognition and social cognition in the Acorn Woodpecker

Bachelor of Science, *Summa Cum Laude*, Environmental Biology   May 2012
State University of New York College of Environmental Science and Forestry

> HONORS THESIS: Tail communication in the Eastern gray squirrel, *Sciurus carolinensis*

MANUSCRIPTS IN REVIEW
M. A. Pardo, K. Fristrup, D. S. Lolchuragi, J. Poole, P. Granli, C. Moss, I. Douglas-Hamilton, and G. Wittemyer. African elephants address one another with individually specific calls. In review at *Nature Ecology and Evolution*. Preprint available at: https://doi.org/10.1101/2023.08.25.554872

M. A. Pardo, D. S. Lolchuragi, J. Poole, P. Granli, C. Moss, I. Douglas-Hamilton, and G. Wittemyer. African elephant rumbles differ between populations and sympatric social groups. In review at *Proceedings of the Royal Society B*.

PUBLICATIONS
K. Odom, M. Araya-Salas, J. Morano, R. Ligon, G. Leighton, C. Taff, A. Dalziell, A. Billings, R. Germain, **M. Pardo,** L. Guimarães de Andrade, D. Hedwig, S. Keen,

Y. Shiu, R. Charif, M. Webster, A. Rice. (2021) Comparative bioacoustics: a roadmap for quantifying and comparing animal sounds across diverse taxa. *Biological Reviews* 96:1135-1159.

M. A. Pardo, E. L. Walters, W. D. Koenig. (2020) Experimental evidence that acorn woodpeckers recognize relationships among third parties no longer living together. *Behavioral Ecology* 31:1257-1265.

M. A. Pardo, C. E. Hayes*, E. L. Walters, W. D. Koenig. (2020) Acorn woodpeckers vocally discriminate current and former group members from non-group members. *Behavioral Ecology* 31:1120-1128.

M. A. Pardo, J. H. Poole, A. S. Stoeger, P. H. Wrege, C. E. O'Connell-Rodwell, U. K. Padmalal, S. de Silva. (2019) Differences in combinatorial calls among the 3 elephant species cannot be explained by phylogeny. *Behavioral Ecology* 30:809-820.

M. A. Pardo, E. A. Sparks, T. S. Kuray, N. D. Hagemeyer, E. L. Walters, W. D. Koenig. (2018) Wild acorn woodpeckers recognize associations between individuals in other groups. *Proceedings of the Royal Society B* 285: 20181017 (cover article)

L. King, **M. Pardo**, S. Weerathunga, T. V. Kumara, N. Jayasena, J. Soltis, and S. de Silva. (2018) Wild Sri Lankan elephants *(Elephas maximus)* retreat from the sound of disturbed Asian honey bees *(Apis cerana indica). Current Biology* 28:R64-R65.

S. A. Pardo and **M. A. Pardo.** (2018) Statistical methods for field and laboratory studies in behavioral ecology. CRC Press, Boca Raton, FL 308p.

M. A. Pardo, S. A. Pardo, and W. M. Shields. (2014) Eastern gray squirrels *(Sciurus carolinensis)* communicate with the positions of their tails in an agonistic context. *American Midland Naturalist* 172:360-366.

*Undergraduate author

INVITED TALKS
M. A. Pardo, K. Fristrup, D. Lolchuragi, J. Poole, P. Granli, C. Moss, I. Douglas-Hamilton, and G. Wittemyer. Do elephants have names? Individual vocal labeling in African elephants. Invited oral presentation at Protolang Conference Symposium: Elephants as a promising model for studying language evolution, 2023, Rome, Italy.

M. A. Pardo, K. Fristrup, D. Lolchuragi, J. Poole, P. Granli, C. Moss, I. Douglas-Hamilton, and G. Wittemyer. Do elephants have names? Individual vocal labeling in African elephants. Invited oral presentation at Decoding Communication in Non-human Species Workshop, 2023, Berkeley, CA

M. A. Pardo, E. L. Walters, and W. D. Koenig. Social cognition in the acorn woodpecker. Invited talk at University of Vienna, 2019, KLF Grünau, Austria.

M. A. Pardo, E. L. Walters, and W. D. Koenig. Social cognition in the acorn woodpecker (presented in Spanish). Invited talk at Universidad CES, 2018, Medellín, Colombia

CONFERENCE PRESENTATIONS
M. A. Pardo, K. Fristrup, D. Lolchuragi, J. M. Leshudukule, J. Poole, P. Granli, C. Moss, and G. Wittemyer. Do elephants have names? Individual vocal labeling in African elephants. Oral presentation at African Bioacoustics Conference, 2022, Skukuza, South Africa

M. A. Pardo, K. Fristrup, D. Lolchuragi, J. M. Leshudukule, J. Poole, P. Granli, C. Moss, and G. Wittemyer. Do elephants have names? Individual vocal labeling in African elephants. Oral presentation at Animal Behavior Society, 2022, San José, Costa Rica

M. A. Pardo, D. Lolchuragi, J. Poole, P. Granli, K. Fristrup, and G. Wittemyer. Do elephants have names? Individual vocal labeling in African elephants. Oral presentation at Front Range Student Ecology Symposium, 2020, Fort Collins, CO

M. A. Pardo, E. L. Walters, and W. D. Koenig. Long-term vocal recognition in the acorn woodpecker. Oral presentation at the 17th Congress of the International Society for Behavioral Ecology, 2018, Minneapolis, MN

M. A. Pardo, E. L. Walters, and W. D. Koenig. A social bird knows the group membership of outsiders. Oral presentation at the 16th Congress of the International Society for Behavioral Ecology, 2016, Exeter, UK

M. A. Pardo, E. L. Walters, and W. D. Koenig. One syllable, many calls: combinatorial communication in Acorn Woodpeckers? Poster session presented at: Animal Behavior Society, 2015 Jun 11-14, Anchorage, AK

M. A. Pardo and S. de Silva. Preliminary recordings of wild Asian elephant vocalizations in preparation for playback experiments. Poster session presented at: International Elephant and Rhino Conservation and Research Symposium, 2013 Aug 26-30, Pittsburgh, PA

TEACHING EXPERIENCE
- Mapping culture and conservation   Fall 2020, 2022
    - Designed and taught two modules on human-wildlife conflict and indigenous conservation
- Virtual workshop on acoustic analysis in R for students doing research in bioacoustics at Northern Colorado University   Spring 2021

- Virtual workshop on acoustic analysis in R for Colorado chapter of The Wildlife Society   Spring 2021
- First-Year Writing Seminar, Instructor of record   Spring 2019
  - "Lying birds and dancing bees: how animals communicate"
- Hormones and Behavior, TA   Fall 2018
- Hormones and Behavior, TA   Fall 2016
- Introduction to Animal Behavior, TA   Fall 2014

GRANTS AND FELLOWSHIPS
- NSF Postdoctoral Research Fellowship in Biology   2019
- Ivy Graduate Fellowship, Cornell Lab of Ornithology   2017
- NSF Doctoral Dissertation Improvement Grant   2017
- National Geographic Young Explorers Grant   2017
- Charles Walcott Graduate Fellowship, Cornell Lab of Ornithology   2017
- Athena Fund, Cornell Lab of Ornithology   2016
- Eleanore Stuart Graduate Fellowship, Cornell Lab of Ornithology   2015
- Animal Behavior Society Student Research Grant   2014
- American Society of Mammalogists Student Research Grant   2014
- Sigma Xi Grant-in-Aid-of-Research   2014
- Athena Fund, Cornell Lab of Ornithology   2013
- NSF Graduate Research Fellowship (GRFP)   2013
- Athena Fund, Cornell Lab of Ornithology   2012

MENTORING EXPERIENCE
- Piper Dumont, undergraduate student   Fall 2020-present
  - Taught Piper acoustic analysis and statistical analysis in R, supervised completion of undergraduate thesis project, produced manuscript with her as first author currently in final stages of preparation
- Moeumu Ulimi, Master's student   Fall 2022
  - Taught Moeumu to use Raven Pro software, provided advice on research project
- Casey Hayes, undergraduate student   Spring & Summer 2018
  - Mentored Casey through design and statistical analysis of Honor's thesis on vocal recognition in Acorn Woodpeckers, and published paper with her as co-author
- Robert Anderson (undergrad) & Sarah Heimbach (recent grad)   2017
  - Hired Robert and Sarah as field assistants and taught them behavioral data collection techniques and Raven Pro acoustic analysis software
- Emilee Sparks and Tejal Kuray (recent graduates)   Spring 2016
  - Hired Emilee and Tejal as field assistants, taught them behavioral data collection techniques and Raven Pro acoustic analysis software, and published a paper with them as co-authors

SCIENTIFIC OUTREACH & PROMOTION OF DIVERSITY, EQUITY, & INCLUSION

- Presentation to staff of Save The Elephants in Kenya (April 2022)
- Designed and taught workshop on Microsoft Excel for Kenyan staff members of Save The Elephants, Ewaso Lions, and Grevy's Zebra Trust (November 2021)
- Designed and taught mini course on animal communication to teach to 4th grade students in Spring 2019 as part of Cornell GRASSHOPR program
- Helped teach workshop on ornithology to teach to 7th-9th grade girls in Spring 2019 as part of Expanding Your Horizons program at Cornell
- Mist-netting demonstration and presentation to undergraduates of underprivileged backgrounds from UC Berkeley (May 2018)
- Mist-netting demonstration and presentation for high school students from underprivileged backgrounds through California Academy of Sciences (Spring 2017)
- Presentation to undergraduate class from University of Chicago visiting Hastings Reserve (Spring 2017)
- Presentation about STEM career paths to high school students from underprivileged backgrounds through California Academy of Sciences (Spring 2016)
- Mist-netting demonstration and presentation for high school students from underprivileged backgrounds through California Academy of Sciences (Spring 2015)
- Presentation to undergraduate class from University of Chicago visiting Hastings Reserve (Spring 2015)
- Presentation to group of local schoolchildren and national park staff in Udawalawa, Sri Lanka (Spring 2014)
- Wrote blog posts about fieldwork with Asian elephants for maximus.trunksnleaves.org blog (December 2012 through May 2019)