

**AMY L. SCHREIER**

Department of Biology  
 Regis University, 3333 Regis Blvd  
 Denver, CO 80221

Tel: 303.964.6584  
 Fax: 303.964.5480  
 Email: [aschreier@regis.edu](mailto:aschreier@regis.edu)

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**Education**

- 2009      **Ph.D. in Physical Anthropology**  
*The Graduate Center, City University of New York*  
*New York Consortium in Evolutionary Primatology*
- 2004      **M.Phil. in Physical Anthropology**  
*The Graduate Center, City University of New York*
- 1998      **B.S. in Biology & Society**  
*Cornell University*

**Academic Positions**

- 2021-present **Director of Honors Program** *Regis College, Regis University*
- 2017-present **Associate Professor** *Biology Department, Regis University*
- 2018-present **Research Associate** *Animal Welfare and Internal Research, Denver Zoo*
- 2012-2017    **Assistant Professor** *Biology Department, Regis University*
- 2009-present **Instructor** *Maderas Rainforest Conservancy - La Suerte and Ometepe*  
*Biological Field Stations, Costa Rica and Nicaragua*
- 2011-2012    **Lecturing Fellow** *Thompson Writing Program, Duke University*
- 2011-2012    **Adjunct Assistant Professor** *Department of Evolutionary Anthropology,*  
*Duke University*
- 2009-2011    **Visiting Assistant Professor** *Department of Evolutionary Anthropology,*  
*Duke University*
- 2008-2009    **Lecturing Fellow** *Thompson Writing Program, Duke University*
- 2006-2008    **University Writing Fellow** *City College of New York, CUNY*
- 2002-2004    **Teaching Fellow** *Department of Anthropology, Lehman College, CUNY*
- 2003          **Adjunct Lecturer** *Department of Anthropology, Lehman College, CUNY*
- 2001, 2004    **Adjunct Lecturer** *Department of Anthropology Hunter College, CUNY*

**Research Interests**

Primate Behavior, Ecology, and Conservation; Effects of Forest Fragmentation on Primate Behavioral Ecology and Population Structure; Mammalian Social Dynamics; Juvenile Social Development and Life History; Primate Cognitive Ecology; Baboon Socioecology and Evolutionary History

## **Publications**

\* = student co-author

Bolt, L.M., Brandt, L., Molina, R., **Schreier, A.L.** (2021). Maderas Rainforest Conservancy: A One-Health approach to conservation. *American Journal of Primatology* e23293. DOI: 10.1002/ajp.23293

**Schreier, A.L.**, \*Readyhough, T.S., Moresco, A., Davis, M., Joseph, S. (2021). Social dynamics of a newly integrated bachelor herd of Asian elephants (*Elephas maximus*): welfare implications. *Journal of Applied Animal Welfare Science*. DOI: 10.1080/10888705.2021.1908141

Bolt, L.M., Russell, D.G, **Schreier, A.L.** (2021). Anthropogenic edges impact howler monkey (*Alouatta palliata*) feeding behaviour in a Costa Rican rainforest. *Primates* 62: 647-657. DOI: 10.1007/s10329-021-00904-y

**Schreier, A.L.**, Bolt, L.M., \*Russell, D.G., \*Jacobson, Z.S., \*Readyhough, T.S., \*Merrigan-Johnson, C., \*Coggeshall, E.M.C. (2021) Mantled howler monkeys (*Alouatta palliata*) in a Costa Rican forest fragment do not modify activity budgets or spatial cohesion in response to anthropogenic edges. *Folia Primatologica* 92: 49-57. DOI: 10.1159/000511974

Bolt, L.M., \*Cavanaugh, M., **Schreier, A.L.** (2021) Lone males: solitary and group-living male mantled howler monkey behavioural ecology in a Costa Rican rainforest. *American Journal of Physical Anthropology* 174: 201-212. DOI: 10.1002/ajpa.24152

**Schreier, A.L.**, Grove, M. (2021) Random walk analyses in primates. In *GPS and GIS for Primatologists: A Practical Guide to Spatial Analysis*, C Shaffer et al. (Eds.). Cambridge: Cambridge University Press.

Bolt, L.M., **Schreier, A.L.**, Voss, K.A., \*Sheehan, E.A., Barrickman, N.L. (2020) Down by the riverside: Natural riparian and anthropogenic edge effects and their impact on monkeys and vegetation in a fragmented tropical wet forest in Costa Rica. *Biotropica* 52: 541-553. DOI: 10.1111/btp.12769

Bolt, L.M., \*Russell, D.G., \*Coggeshall, E.M.C., \*Jacobson, Z.S., \*Merrigan-Johnson, C., **Schreier, A.L.** (2020) Howling by the river: howler monkey (*Alouatta palliata*) communication in an anthropogenically-altered riparian forest in Costa Rica. *Behaviour* 157: 77-100. DOI 10.1163/1568539X-00003582.

**Schreier, A.L.**, \*Schlaht, R.M., Swedell, L. (2019) Meat eating in while hamadryas baboons: opportunistic trade-offs between insects and vertebrates. *American Journal of Primatology* 81(7): e23029. DOI: 10.1002/ajp.23029

Bolt, L.M., **Schreier, A.L.**, \*Russell, D.G., \*Jacobson, Z.S., \*Merrigan-Johnson, C., \*Barton, M.C., \*Coggeshall, E.M.C. (2019) Howling on the edge: Mantled howler monkey (*Alouatta palliata*) howling behaviour and anthropogenic edge effects in a fragmented tropical rainforest in Costa Rica. *Ethology* 125(9): 593-602. DOI: 10.1111/eth.12886

Bolt, L.M., **Schreier, A.L.**, Voss, K.A., \*Sheehan, E.A., Barrickman, N.L., \*Pryor, N.P., \*Barton, M.C. (2018) The influence of anthropogenic edge effects on primate populations and their habitat in a fragmented rainforest in Costa Rica. *Primates* 59(3): 301-311. DOI: 10.1007/s10329-018-0652-0

Boug, A., Zafar-ul Islam, M., Iwamoto, T., Mori, A., Yamane, A., **Schreier, A.L.** (2017) The relationship between artificial food supply and natural food selection in two troops of commensal hamadryas baboons in Saudi Arabia. *Journal of Threatened Taxa* 9(10): 10741-10756. DOI: 10.11609/jot.3348.9.10.10741-10756

Barrickman, N., **Schreier, A.L.**, Glander, K.E. (2015) Testing parallel laser image scaling for remotely measuring body dimensions on mantled howling monkeys (*Alouatta palliata*). *American Journal of Primatology* 77: 823-832. DOI: 10.1002/ajp.22416

- Schreier, A.L.**, Grove, M. (2014) Recurrent patterning in the daily foraging routes of hamadryas baboons (*Papio hamadryas*): Spatial memory in large-scale versus small-scale space. *American Journal of Primatology* 76: 421-435. DOI: 10.1002/ajp.22192
- Schreier, A.L.**, Swedell, L. (2012) Ecology and sociality in a multilevel society: ecological determinants of social cohesion in hamadryas baboons. *American Journal of Physical Anthropology* 148: 580-588. DOI: 10.1002/ajpa.22076
- Schreier, A.L.**, Swedell, L. (2012) The socioecology of network scaling ratios in the multilevel society of hamadryas baboons. *International Journal of Primatology* 33: 1069-1080. DOI: 10.1007/s10764-011-9572-1
- Swedell, L., Saunders, J., **Schreier, A.**, Davis, B., Tesfaye, T., Pines, M. (2011) Female “dispersal” in hamadryas baboons: transfer among social units in a multi-level society. *American Journal of Physical Anthropology* 145: 360-370. DOI: 10.1002/ajpa.21504
- Schreier, A.L.**, Grove, M. (2010) Ranging patterns of hamadryas baboons: random walk analyses. *Animal Behaviour* 80: 75-87. DOI: 10.1016/j.anbehav.2010.04.002
- Schreier, A.L.** (2010) Feeding ecology, food availability, and ranging patterns of wild hamadryas baboons at Filoha. *Folia Primatologica* 81: 129-145. DOI: 10.1159/000316562  
\*Editor's Choice
- Schreier, A.L.**, Swedell, L. (2009) The fourth level of social structure in a multi-level society: ecological and social functions of clans in hamadryas baboons. *American Journal of Primatology* 71: 948-955. DOI: 10.1002/ajp.20736  
\*Featured Article
- Swedell, L., **Schreier, A.L.** (2009) Male aggression towards females in hamadryas baboons: conditioning, coercion, and control. In *Sexual Coercion in Primates and Humans: An Evolutionary Perspective on Male Aggression Against Females*. eds. M.N. Muller and R.W. Wrangham. Cambridge: Harvard University Press, pp. 244-268.
- Schreier, A.**, Swedell, L. (2008) Use of palm trees as a sleeping site by hamadryas baboons (*Papio hamadryas hamadryas*) in Ethiopia. *American Journal of Primatology* 70: 107-113. DOI: 10.1002/ajp.20465
- Swedell, L., Hailemeskel, G., **Schreier, A.** (2008) Composition and seasonality of diet in wild hamadryas baboons: preliminary findings from Filoha. *Folia Primatologica* 79: 476-490. DOI: 10.1159/000164431
- Schreier, A.**, Evans, G.W. (2003) Adrenal cortical response of young children to modern and ancient stressors. *Current Anthropology* 44(2): 306-309. DOI: 10.1086/367974

### **Submitted Manuscripts in Review**

\* = Student co-author

**Schreier, A.L.**, Voss, K.A., Bolt, L.M. (in review). Functionally defining forest edge: a case study of mantled howler monkey (*Alouatta palliata*) behavioural edge effects. *International Journal of Primatology*.

**Schreier, A.L.**, Voss, K.A., Bolt, L.M. (submitted). Behavioral responses to riparian and anthropogenic edge effects in mantled howler monkeys (*Alouatta palliata*) in a disturbed riverine forest. *American Journal of Primatology*.

Bolt, L.M., Russell, D.G., **Schreier, A.L.** (submitted). River edge feeding: howler monkey feeding ecology in a fragmented riparian forest. *Oecologia*.

\*\*Thevarajah, S., \*\*Readyhough, T.S., Davis, M., Moresco, A., Joseph, S., **Schreier, A.L.** (submitted). Nighttime behavior and the duration of social relationships in bull Asian elephants. *Applied Animal Behaviour Science*.

\*Readyhough, T.S., Joseph, S., **Schreier, A.L.** (in review). The effects of Zoo Lights on animal welfare: a case study of great Indian hornbills at Denver Zoo. *Zoo Biology*.

\*Readyhough, T.S., Joseph, S., Davis, M., Moresco, A., **Schreier, A.L.** (in review). Socialization impacts stereotypical behavior in bull Asian elephants (*Elephas maximus*). *Journal of Applied Animal Welfare Science*.

### **Manuscripts in active preparation**

Swedell, L., **Schreier, A.L.**, Amann, A., Evans, K., Henriquez, M., Chowdhury, S. (in prep) The behavioral biology of hamadryas baboons in comparative perspective. In: *Baboons: Behavior, ecology, and taxonomy*, J. Wallis (Ed.). Cambridge: Cambridge University Press.

Moresco, A., Brown, J.L., Davis, M., Joseph, S., Prado, N., Readyhough, T.S., Grey, C., **Schreier, A.L.** (in prep) Endocrine correlates of socialization in Asian elephants. To be submitted to *Plos One*.

**Schreier, A.L.**, Barron, D.J., Swedell, L. (in revision) Group fissions in the multilevel society of hamadryas baboons (*Papio hamadryas*) as mitigation of scramble competition. To be submitted to *American Journal of Primatology*.

### **Published Abstracts/Professional Conference Presentations**

\* = Student co-author

**Schreier, A.L.**, Bolt, L.M. How does forest fragment size affect mantled howler monkey (*Alouatta palliata*) activity, group size, and spatial cohesion? XXVIII Congress of the International Primatological Society, Quito, Ecuador, August 2020 → abstract accepted, conference postponed to January 2022 due to covid-19

\*Britton, T.L., Laura, L.M., **Schreier, A.L.** Comparing *Cebus capucinus* and *Alouatta palliata* social activity and cohesion in a fragmented forest in Costa Rica. XXVIII Congress of the International Primatological Society, Quito, Ecuador, August 2020 → abstract accepted, conference postponed to January 2022 due to covid-19

\*\*Readyhough, T.R., Joseph, S., Davis, M., Moresco, A., **Schreier, A.L.** Socialization impacts stereotypical behavior in bull Asian elephants (*Elephas maximus*). 58<sup>th</sup> Annual Conference of the Animal Behavior Society, August 2021.

**Schreier, A.L.**, \*Rebarchek, G., \*Maddigan, E., \*Green, K., Joseph, S., Yi, Y., Lee, S., Ge, H., Lee, B., Choe, J., Moresco, A. Mixed-species pairs as a management strategy for gibbons and siamangs: a behavioral comparison of mixed-species and same-species pairs. 90<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Baltimore, MD, April 2021.

Bolt, L.M., \*Cavanaugh, M., **Schreier, A.L.** Lone males: solitary and group-living male mantled howler monkey behavioural ecology in a Costa Rican rainforest. 44<sup>th</sup> Annual Meeting of the Canadian Association for Physical Anthropology, Canada, November 2020.

\*Rebarchek, G., \*Maddigan, E., Joseph, S., Moresco, A., **Schreier, A.L.** Mixed-species gibbon and siamang pairs at Denver Zoo engage in species-typical social behavior. 43<sup>rd</sup> Meeting of the American Society of Primatologists, Denver, CO, September 2020.

**Schreier, A.L.**, Bolt, L.M. Howling for food and females: A cross-site comparison of mantled howler monkey (*Alouatta palliata*) howling behavior in Costa Rica. 89<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Los Angeles, CA, April 2020. (conference canceled because covid-19; presentation online)

\*Owens, J., Bolt, L.M., **Schreier, A.L.** Comparing activity budgets in female white-faced capuchin monkeys (*Cebus capucinus*) with and without infants in the edge and interior of a fragmented forest in Costa Rica. 89<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Los Angeles, CA, April 2020. (conference canceled because covid-19; presentation online)

\*Hamilton, B., \*Maddigan, E., \*Thevarajah, S., **Schreier A.L.** Bison at Rio Mora National Wildlife Refuge may impact shortgrass prairie through seasonal activity budgets. 26<sup>th</sup> Annual Front Range Student Ecology Symposium, Fort Collins, CO, February, 2020.

\*Readyhough, T.S., Joseph, S., Moresco, A., Davis, M., **Schreier, A.L.** Bull elephant (*Elephas maximus*) behavior in varying social combinations at Denver Zoo. Elephant Managers Association Annual Conference, Denver, CO, October 2019.

\*Jacobson, Z.S., Bolt, L.M., \*Russell, D.G., **Schreier, A.L.** The impact of edges on mantled howler monkey (*Alouatta palliata*) feeding behaviour in a fragmented Costa Rican rainforest. Annual Meeting of the Canadian Association for Physical Anthropology, Banff, Alberta, Canada, October 2019.

\*Coggeshall, E.M., **Schreier, A.L.**, \*Merrigan-Johnson, C., Bolt, L.M. The role of social interaction and nearest neighbor preferences in juvenile *Alouatta palliata* social development. 88<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Cleveland, OH, March 2019.

\*Rosso, J., **Schreier, A.L.**, \*Coggeshall, E.M., \*Merrigan-Johnson, C., Bolt, L.M. The influence of anthropogenic forest edge on social cohesion of *Alouatta palliata* in Costa Rica. 88<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Cleveland, OH, March 2019.

\*Coggeshall, E.M., **Schreier, A.L.**, \*Merrigan-Johnson, C., Bolt, L.M. The role of social interaction and nearest neighbor preferences in juvenile *Alouatta palliata* social development. Northwest Anthropology Conference, Kennewick, WA, March 2019.

Bolt, L.M., **Schreier, A.L.** Voss, K.A., Barrickman, N.L. Natural and anthropogenic edge effects and their influence on monkeys and vegetation in a fragmented tropical rainforest in Costa Rica. 42<sup>nd</sup> Annual Meeting of the Canadian Association for Physical Anthropology, London, ON, Canada, October 2018.

**Schreier, A.L.**, Bolt, L.M., \*Sheehan, E., \*Jacobson, Z.S., \*Azzarra, M.L., \*Schlaht, R.M., \*Russell, D. The relationship between feeding competition and activity and social cohesion patterns in mantled howler monkeys (*Alouatta palliata*) in a Costa Rican forest fragment. XXVII Congress of the International Primatological Society, Nairobi, Kenya, August 2018.

\*Sheehan, E., **Schreier, A.L.**, Jacobson, Z.S., \*Russell, D., \*Azzarra, M.L., \*Schlaht, R.M., Bolt, L.M. Social cohesion varies by sex and forest zone among mantled howler monkeys (*Alouatta palliata*) in a Costa Rican forest fragment. 87<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Austin, TX, April 2018.

\*Azzarra, M.L., **Schreier, A.L.**, \*Jacobson, Z.S., \*Russell, D., \*Sheehan, E., \*Schlaht, R.M., Bolt, L.M. Foraging and spatial behavior of *Alouatta palliata* in the edge and interior of a Costa Rican forest fragment. 87<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Austin, TX, April 2018.

**Schreier, A.L.**, \*Schlaht, R.M. Tree preference and coexistence of white-faced capuchins and mantled howler monkeys in a Costa Rican forest fragment. 86<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, New Orleans, April 2017.

**Schreier, A.L.**, \*Schlaht, R.M., Swedell, L. Meat-eating in hamadryas baboons: temporal patterns of meat consumption and doum palm fruit availability. 86<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, New Orleans, April 2017.

\*Truong, B.T., **Schreier, A.L.**, Franco, M-d. Comparison of genetic structure between mantled howler (*Alouatta palliata*) and white-faced capuchin (*Cebus capucinus*) monkeys in La Suerte, Costa Rica. Tribeta Western Region Convention, Gunnison, CO, April 2017.

\*Seiwald, S., Franco, M-d., **Schreier, A.L.** Comparison of genetic structure of a mantled howler (*Alouatta palliata*) population in small and large forest fragments in La Suerte, Costa Rica. Tribeta Western Region Convention, Gunnison, CO, April 2017.

\*Abraham, J., **Schreier, A.L.**, Franco, M. Impact of forest fragmentation on the genetic heterozygosity of white-faced capuchins (*Cebus capucinus*) in Costa Rica. Tribeta Western Region Convention, Gunnison, CO, April 2017.

**Schreier, A.L.**, Barrickman, N.L., \*Andersen, F. (2016) Why be juvenile? The role of energetics and sociality in primate development. XXVI Congress of the International Primatological Society, Chicago, IL, August 2016.

**Schreier, A.L.**, Barrickman, N.L., Bolt, L., Franco, M-d., \*Barton, M., \*Pryor, N. Influence of edge effects on primate populations and their habitat in a fragmented rainforest in Costa Rica. XXVI Congress of the International Primatological Society, Chicago, IL, August 2016.

Franco, M-d., **Schreier, A.L.**, \*Barton, M., \*Pryor, N., Barrickman, N.L. The Influence of Habitat Fragmentation on Dispersal and Genetic Diversity in Mantled Howler Monkeys (*Alouatta palliata*) in Costa Rica. The Allied Genetics Conference, Orlando, FL, July 2016.

**Schreier, A.L.**, Franco, M-d., \*Barton, M., \*Pryor, N., Barrickman, N.L. (The Influence of Habitat Fragmentation on Dispersal and Genetic Diversity in Mantled Howler Monkeys (*Alouatta palliata*) in Costa Rica. 85<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Atlanta, GA March 2016.

**Schreier, A.L.**, Franco, M-d., \*Barton, M., \*Pryor, N. (2015) The Influence of Habitat Fragmentation on Dispersal and Genetic Diversity in Mantled Howler Monkeys (*Alouatta palliata*) in Costa Rica. Zoos and Aquariums Committing to Conservation Conference, Denver Zoo.

\*Pryor, N.P., **Schreier, A.L.** (2015) The influence of diet on aggression and locomotion in *A. palliata* and *C. capucinus* in Costa Rica. 84<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, St. Louis, MO.

\*Reints, R.G., **Schreier, A.L.** (2015) Sex differences in activity patterns between wild and captive *Cebus* and *Alouatta*. 84<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, St. Louis, MO.

**Schreier, A.L.**, Barrickman, N.L., \*Kaaret, A. (2014) The relationship between rank acquisition and social interactions in lemurs. XXV Congress of the International Primatological Society, Hanoi, Vietnam.

**Schreier, A.L.**, Moscovitch, M., \*Mineo, N., \*Willbanks, H., Barrickman, N.L. (2014) The development of feeding and social behavior in wild mantled howler monkeys. 83<sup>rd</sup> Annual Meeting of the American Association of Physical Anthropologists, Calgary.

Barrickman, N., **Schreier, A.L.** (2014) Using the parallel laser method to estimate body size in wild mantled howler monkeys (*Alouatta palliata*). 83<sup>rd</sup> Annual Meeting of the American Association of Physical Anthropologists, Calgary.

**Schreier, A.L.**, Barrickman, N. L., \*Knott, K. (2013) The effect of sibling birth on parent-offspring relationships in lemurs. 82<sup>nd</sup> Annual Meeting of the American Association of Physical Anthropologists, Knoxville, Tennessee.

**Schreier, A.L.**, Grove, M. (2012) Foraging and the evolution of spatial memory in primates. XXIV Congress of the International Primatological Society. Cancun, Mexico.

Barrickman, N., **Schreier, A.L.** (2012) Why be juvenile? Social development in lemurs. XXIV Congress of the International Primatological Society. Cancun, Mexico.

**Schreier, A.L.**, Barrickman, N.L., \*Gupta, S. (2012) Sex-typing in juvenile male and female ring-tailed lemurs. 81<sup>st</sup> Annual Meeting of the American Association of Physical Anthropologists, Portland, Oregon.

Barrickman, N.L., **Schreier, A.L.** (2011) The juvenile transition: sex-specific behavioural role-modeling in Coquereli's sifakas. 39<sup>th</sup> Annual Congress of the Canadian Association of Physical Anthropology, Montreal, Canada.

\*Ingraham, J, **Schreier, A.L.** (2011) Path analysis of vocally-mediated intergroup spacing strategies in mantled howling monkeys. *American Journal of Physical Anthropology* (Supplement 52): 173-174.

**Schreier, A.L.**, Swedell, L. (2010) Food distribution and social cohesion in hamadryas baboons: testing the assumptions behind the evolution of hamadryas social structure. XXIII Congress of the International Primatological Society. Kyoto, Japan.

**Schreier, A.L.**, Swedell, L. (2010) Resource availability and social structure in wild hamadryas baboons. *American Journal of Physical Anthropology* (Supplement 50): 209.

\*Subramanian, M., **Schreier, A.L.**, Bai-Sesay, P., Koroma, Y., Koroma, I. (2010) A public health approach to primate conservation in Sierra Leone. AMNH Center for Biodiversity and Conservation New York Student Conservation Conference. New York, NY.

**Schreier, A.L.**, Groves, M.J. (2009) Ranging patterns of hamadryas baboons: random walk analyses. *American Journal of Physical Anthropology* (Supplement 48): 231-232.

**Schreier, A.L.** (2008) Ranging patterns in wild hamadryas baboons in Ethiopia. *American Journal of Physical Anthropology* (Supplement 46): 188.

Swedell, L., Saunders, J., Pines, M., **Schreier, A.**, Davis, B. (2008) Alternative reproductive strategies in male hamadryas baboons: leaders, followers, and solitary males. *American Journal of Physical Anthropology* (Supplement 46): 203.

**Schreier, A.L.**, Swedell, L. (2007) Evidence for clans in a population of wild hamadryas baboons. *American Journal of Physical Anthropology* (Supplement 44): 209-210.

**Schreier, A.L.**, Savukova, G., Hartman, H. (2007) Writing and Assessment of Student Learning Outcomes and the WAC/WID program at the City College of New York. The 49<sup>th</sup> Annual Midwest Modern Languages Association Convention, Cleveland, OH.

**Schreier, A.L.**, Savukova, G., Kim, H., Tuck, E., Braxton, C., Ikeda, Y. (2007) Possibilities and Pitfalls of Scaling Up: WAC/WID at City College. Biannual CUNY WAC/WID Conference, New York, NY.

Swedell, L., **Schreier, A.L.** (2006) Male Aggression Towards Females in Hamadryas Baboons. XXI Congress of the International Primatological Society. Entebbe, Uganda.

### **Invited Presentations**

(2020) Evaluación del comportamiento animal con métodos científicos. Conferencia La Vanguardia de Bienestar Animal en el Siglo XXI, Cali, Colombia (presented via Zoom).

(2019) How does forest fragmentation impact mantled howler monkeys (*Alouatta palliata*) in Costa Rica? Department of Biology Seminar Series, Regis University.

(2019) Howling for food and females: A cross-site comparison of mantled howler monkey (*Alouatta palliata*) howling behavior in Costa Rica, with Laura M. Bolt. University Research and Scholarship Council (URSC) Symposium, Regis University.

(2019) Primates in Peril: Conservation of non-human primates. Metropolitan State University, Denver, CO.

(2019) Howling for food and females: A cross-site comparison of mantled howler monkey (*Alouatta palliata*) howling behavior in Costa Rica. University Research and Scholarship Council Symposium, Regis University.

(2019) Animal behavioral Research and Sampling Methods. Denver Zoo.

(2016) Primate Behavior and Conservation. Metropolitan State University, Denver, CO.

(2016) Genetic structure in a howler monkey population in Costa Rica, with \*Matt Barton and Marie-do Franco. URSC Symposium, Regis University.

(2015) Primate Conservation and Adaptation. Anthropology 440G-Primate Adaptation and Evolution, Metropolitan State University of Denver, Denver, CO.

(2015) The Influence of Habitat Fragmentation on Dispersal and Genetic Diversity in Mantled Howler Monkeys (*Alouatta palliata*). Department of Biology Seminar Series, Regis University, Denver, CO.

(2015) Determinants of Sociality in Hamadryas Baboons. Department of Anthropology Seminar Series, Colorado College, Colorado Springs, CO.

(2014) Genetic Analysis of the Socioecological Model in Mantled Howler Monkeys (*Alouatta palliata*) and White-Faced Capuchins (*Cebus capucinus*) in Costa Rica, with Marie-do Franco, Matthew Barton, Monica Murray, Regis College Fall Faculty Conference, October 2014.

(2013) Primate Conservation. Anthropology 440G-Primate Adaptation and Evolution, Metropolitan State University of Denver, Denver, CO.

(2012) Primate Field Research. TriBeta Biological Honor Society Meeting, Regis University, Denver, CO.



- (2011) Baboon Social Structure and Lemur Juvenile Social Development: Implications for Humans. Scholars Symposium, Thompson Writing Program, Duke University, Durham, NC.
- (2011) Feeding Ecology in Primates. Concepts in Evolutionary Anthropology Graduate Tutorial Series, Duke University, Durham, NC.
- (2010) Baboon Feeding Ecology, Food Availability, and Ranging Patterns. Evolutionary Anthropology Talk Series, Duke University, Durham, NC.
- (2010) Social Cohesion and Resource Distribution in Hamadryas Multilevel Society. Pusey-Alberts Lab Meeting, Duke University, Durham, NC.
- (2009) The Evolution of Primate Social Organization. Evolutionary Anthropology Graduate Seminar, Duke University, Durham, NC.
- (2009) Social Structure and Travel Patterns in Hamadryas Baboons (*Papio hamadryas*) in Ethiopia. LemurCon Annual Conference, Duke Lemur Center, Durham, NC.
- (2008) Home Range Use and Travel Patterns in Wild Hamadryas Baboons in Ethiopia. Scholars Symposium, Thompson Writing Program, Duke University, Durham, NC.
- (2008) Influence of Resource Distribution on Travel Patterns and Social Structure in Hamadryas Baboons. New York Consortium in Evolutionary Primatology seminar series, New York, NY.
- (2007) Biological and Ecological Field Study of Hamadryas Baboons (*Papio hamadryas*) in Ethiopia. International Baccalaureate Biology Program, Yonkers High School, Yonkers, NY.
- (2007) Social Structure and Spatial Cohesion in Hamadryas Baboons. New York Consortium in Evolutionary Primatology seminar series, New York, NY.
- (2004) Resource Distribution, Social Structure, and Travel Patterns in Hamadryas Baboons (*Papio hamadryas hamadryas*). New York Consortium in Evolutionary Primatology seminar series, New York, NY.

#### **Non peer-reviewed articles and Media Coverage/Press Releases**

Moresco, A., Joseph, S., Readyhough, T., **Schreier, A.**, Prado-Oviedo, N., Brown, J. Effects of socialization on behavioral, physiological, and reproductive parameters of bull Asian elephants. *AZA Connect*, January 2021.

“Study sheds light on the solitary life of male primates,” *University of Waterloo Stories*, October 20, 2020. <https://uwaterloo.ca/stories/news/study-sheds-light-solitary-life-male-primates>

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“Deforestation is changing the way monkeys communicate,” *Tech Explorist*, by Pranjal Mehar, January 10, 2020. <https://www.techexplorist.com/deforestation-changing-way-monkeys-communicate/29059/>

“Study finds deforestation is changing animal communication,” *Phys Org*, January 9, 2020. <https://phys.org/news/2020-01-deforestation-animal.html>

“Save the plants, save the planet,” *Rainforest Partnership*, by RP Team, April 6, 2018.  
<https://rainforestpartnership.org/save-the-plants-save-the-planet/>

“Plants faring worse than monkeys in increasingly patchy forests of Costa Rica,” *University of Toronto Arts & Science News* and *Science Daily*, by Sean Bettam, March 12, 2018. <https://news.artsci.utoronto.ca/all-news/plants-faring-worse-monkeys-increasingly-patchy-forests-costa-rica/> and <https://www.sciencedaily.com/releases/2018/03/180312155410.htm>

“When two baboon troops go to war,” *BBC Earth News*, by Matt Walker, December 8, 2009.  
[http://news.bbc.co.uk/earth/hi/earth\\_news/newsid\\_8400000/8400019.stm](http://news.bbc.co.uk/earth/hi/earth_news/newsid_8400000/8400019.stm)

### **Research/Field Experience**

2014-present **The Influence of Habitat Fragmentation on Behavioral Ecology and Population Structure in Mantled Howler Monkeys, White-faced Capuchins, and Central American Spider Monkeys**

*La Suerte Biological Field Station, Costa Rica*

*La Selva Biology Field Station, Costa Rica*

Conduct behavioral sampling on activity and spatial cohesion patterns and tree use; population survey to quantify group sizes, composition, and home ranges; vegetation surveys to quantify resource availability and distribution; collect fecal samples for genetic analyses.

2017-present **Animal Behavior and Welfare Research (range of species at Denver Zoo)**

*Denver Zoo, Denver, CO*

Effects of socialization on behavioral, physiologic and reproductive parameters of bull Asian elephants at the Denver Zoo

Animal welfare in mixed-species pairs of gibbons and siamangs at the Denver Zoo

The effects of extended Denver Zoo operating hours during “Zoo Lights” on a pair of Great Indian hornbills

Investigating Mangshan pit viper habitat preference and nocturnal energy expenditure in captivity for improved quality of life and future breeding success

Agonistic behavior in mixed-species groups of *Callimico goeldii*, *Leontopithecus rosalia*, and *Saguinus imperator* at the Denver Zoo

Activity budgets and social interactions of mandrills and Da Brazza’s monkeys

2014 **Determinants of the Length of Juvenility and Social and Genetic Analysis of Kinship in Two Sympatric Species in La Suerte, Costa Rica**

*La Suerte Biological Field Station, Costa Rica*

Examining the factors underlying the length of juvenility in mantled howler monkeys and white-faced capuchins, with a focus on the role of kinship in social development. Collected behavioral data; used the remote parallel laser device remotely measure body size of our study subjects; collected fecal samples from both species from which we will extract DNA.

2014 **Body Measurements of Mantled Howler Monkeys: A Test of the Parallel Laser Remote Measuring Technique**

*La Pacifica, Costa Rica*

Used our parallel laser device to remotely measure howler monkeys; compared our

remote measurements with the actual measurements to test the efficacy of this new method.

- 2011-2013 **Life History and Social Development in Platyrrhines in Ometepe, Nicaragua**  
*Ometepe Biological Field Station, Nicaragua*  
 To better understand the significance of juvenility, and advance understanding of the evolution of life history, this project examines the behavioral social development of two platyrrhine species: mantled howler monkeys and white-faced capuchins. Conducted pilot studies testing methods and collected pilot data. Tested parallel laser method of remotely estimating body size. Will develop into longitudinal study, following juveniles from weaning to sexual maturity.
- 2010-2012 **Why be Juvenile? Life History and the Development of Social Behavior**  
*Duke Lemur Center, Durham, NC*  
 Aim to better understand the behavioral transition that occurs during the juvenile stage in lemurs. Comparing changes in social behavior that occur during the juvenile period, from weaning until maturity, across a sample of several lemur species (ring-tailed lemurs, Coquerel's sifaka, black and white ruffed lemurs). Testing the "need-to-learn" hypothesis and predict that species with a longer life history and slower body growth rate during the juvenile period will experience slower development of social skills and networks.
- 2010 **Promoting Primate Welfare & Public Health: A Primate Conservation Awareness Program for Freetown, Sierra Leone**  
*Tacugama Chimpanzee Sanctuary, Freetown, Sierra Leone*  
 Supervised undergraduate in project investigating locals' perceptions of risk associated with hunting, butchering, and eating bushmeat. Devised questionnaires and interview scripts.
- 2005-2006 **Resource Distribution, Social Structure, and Travel Patterns of Wild Hamadryas Baboons – Dissertation Research**  
*Filoha Outpost, Awash National Park, Ethiopia*  
 Conducted 12-month field study on the social structure and travel patterns of wild hamadryas baboons (*Papio hamadryas*). Collected data on social behavior and spatial cohesion, and mapped travel routes using GIS during all-day follows of baboons. Surveyed vegetation structure of baboons' home range. Managed and ran field site.
- 2004 **Hamadryas Baboon Ecological and Behavioral Sampling – Dissertation Pilot Studies**  
*Filoha Outpost, Awash National Park, Ethiopia*  
 Developed ecological and behavioral research protocols. Conducted vegetation transects; constructed map of baboons' home range using GPS and GIS. Collected pilot behavioral data on baboon activity patterns and social cohesion.
- 2002 **Bovid Distal Humeri as Indicators of Plio-Pleistocene Paleoenvironments**  
*American Museum of Natural History, New York, NY*  
 Measured bovid humeri and analyzed their shapes using ImageJ processing program.
- 2001 **Dominance Hierarchy in Blue Monkeys (*Cercopithecus mitis*)**  
*Kakamega Rainforest, Kenya*

Conducted naturalistic field studies on blue monkeys' (*Cercopithecus mitis*) reproductive biology and affiliative and agonistic behavior. Used MatMan software to construct dominance hierarchy of study group.

2000 **Mirror Self-Recognition in Gorillas**  
*Lehman College, City University of New York, Bronx, NY*  
 Coded video of gorilla mirror exposure and "mark test."

1998 **Physiological Stress Response to Ancient and Modern Stressors in Rural Children**  
*Cornell University, Ithaca, NY*  
 Conducted field research, contributed to study design and instrument development, recruited subjects, trained researchers, led weekly meetings of researchers and principal investigator, analyzed results using SPSS software.

### **Extramural Grants**

"Effects of socialization on behavioral, physiologic and reproductive parameters of bull Asian elephants" – Association of Zoos and Aquariums Conservation Grant, with Anneke Moresco, Sharon Joseph, Janine Brown. September 2018 (\$21,840)

"Comparison of genetic structure of a mantled howler (*Alouatta palliata*) population in small and large forest fragments in La Suerte, Costa Rica" – Tribeta Research Grant with undergraduate Sarah Seiwald. October 2016

"Impact of forest fragmentation on the genetic heterozygosity of white-faced capuchins (*Cebus capucinus*) in Costa Rica" – Tribeta Research Grant with undergraduate Jibin Abraham. October 2016

### **Regis Grants and Awards**

#### *URSC GRANTS*

##### *Faculty Research Grants*

"Does varying howling behavior in relation to resource abundance allow mantled howler monkeys to cope with forest fragmentation?" \$5000. Fall 2020 – URSC Faculty Research and Scholarship Grant

"Persistence of the critically endangered Central American spider monkey in forest fragments" - \$6019.47. Spring 2018 – URSC Faculty Research and Scholarship Grant

\*Named "Provost's scholar" for project's strong fit with the provost's scholarly agenda

"The influence of habitat fragmentation on dispersal and genetic diversity in mantled howler monkeys (*Alouatta palliata*)." \$5000. Spring 2015 - URSC Faculty Research and Scholarship Grant

##### *Student Research Grants*

"Comparison of Genetic Diversity in Mantled Howler Monkeys Affected by Forest Fragmentation at La Suerte Biological Research Station, Costa Rica" – Spring 2019 – URSC Student Research and Scholarship Grant with undergraduate Kaela Siertz

"Forest fragmentation in the La Suerte forest of Costa Rica and its effects on capuchin monkey gut microbiome diversity" – Spring 2018 – URSC Student Research and Scholarship Grant with undergraduate Curtis Laborda

"Comparing Social Cohesion and Activity Patterns of Mantled Howler Monkeys (*Alouatta palliata*) in a Fragmented Forest in Costa Rica" – Spring 2017 – URSC Student Research and Scholarship Grant with M.S. student Elizabeth Sheehan

“Comparison of genetic structure of a mantled howler (*Alouatta palliata*) population in small and large forest fragments in La Suerte, Costa Rica” – Fall 2016 – URSC Student Research and Scholarship Grant with undergraduate Sarah Seiwald

“Impact of forest fragmentation on the genetic heterozygosity of white-faced capuchins (*Cebus capucinus*) in Costa Rica” – Fall 2016 – URSC Student Research and Scholarship Grant with undergraduate Jibin Abraham

### **Teaching Experience**

2012-present ***Department of Biology, Regis University***

Evolution, Upper-level lecture course

Behavioral Ecology, Upper-level lecture course

Evolution, Upper-level lecture course

Advanced Behavioral Ecology, Master’s lecture and seminar course

Grant Writing Colloquium, Master’s seminar course

Conservation Biology, Upper-level seminar course

Introduction to Human Anatomy, Lecture course for pre-nursing students

Primate Ecology and Behavior, Upper-level lecture course

Biological Anthropology, Lecture and lab courses

Introduction to Biology (Organismic and Molecular) Laboratory, Lab sections

Environmental Biology Colloquium and Grant Writing Seminar, Master’s seminar

Seminar in Biology Research Literature, Upper-level seminar course

Writing Analytically (The Naked Ape), first-year writing course

2009-present ***La Suerte Biological Field Station, Costa Rica***

***Ometepe Biological Field Station, Nicaragua***

Primate Behavior and Ecology Field Course

Intensive field course equivalent to an upper-level undergraduate/

beginning graduate course. Consists of traditional classroom lectures and discussions, and learning behavioral and ecological field techniques in the rainforest. Students then develop and complete an independent research project on mantled howler monkeys or white-faced capuchins.

2009-2012 ***Department of Evolutionary Anthropology, Duke University***

Primate Ecology, Lecture course with several labs

Primate Conservation, Discussion-based seminar course

Primate Field Biology, Research-based course taught at Duke Lemur Center

Sociobiology, Lecture course

Interdisciplinary Approaches to Conservation Action, Discussion course

2011-2012 ***Thompson Writing Program, Duke University***

2008-2009 Primate Cognition: Unraveling the Social and Ecological Origins

The Naked Ape: Exploring the Ape-Human Connection

2002-2004 ***Department of Anthropology, Lehman College, CUNY***

Introduction to Human Evolution, Introductory physical anthropology course including both lecture and laboratory components

Primate Behavior and Ecology, Upper-level undergraduate lecture course

2001, 2004 ***Department of Anthropology, Hunter College, CUNY***

Introduction to Human Evolution (laboratory), Laboratory sections of introductory physical anthropology course

1997 ***Department of Design and Environmental Analysis, Cornell University***  
Introduction to Human-Environment Relations, Led discussion sections of introductory environmental psychology course

### **Research Advising and Mentorship Experience**

#### **Regis University, 2012-present**

##### Independent Research in Biology Advisor

Served as advisor to 30+ students on research projects at the Denver Zoo; on habitat fragmentation and behavioral ecology and genetic diversity in mantled howler monkeys and white-faced capuchins in La Suerte, Costa Rica; behavioral development in wild mantled howler monkeys in Ometepe, Nicaragua; meat-eating and hunting in hamadryas baboons; juvenile-adult social interactions in lemurs; and sex-based activity patterns in wild and captive howler and capuchin monkeys

##### Independent Field Research Advisor

Mentored 40+ student projects on mantled howler and capuchin monkey activity budgets, tail use, aggression, locomotion, juvenile development, and social interactions in La Suerte, Costa Rica, May-June 2014, 2015, 2016, 2017, 2018 and four projects on mantled howler monkey activity budgets, use of space, vocalizations, and handedness on Ometepe Island, Nicaragua, July-August 2013.

##### Honors Thesis advisor

Served as advisor for 4 Honors theses

#### **Duke University, 2009-2012**

##### Graduation with Distinction (Senior Thesis) Advisor

Served as advisor to five different undergraduate senior theses for projects on sex-typing in lemurs, juvenile development in lemurs and chimpanzees, and foraging behavior in wild hamadryas baboons

##### Independent Research Project Advisor

Served as advisor to 15 undergraduate independent research projects. Projects ranged from various field studies of wild mantled howler monkeys and white-faced capuchins, juvenile development in lemurs and chimpanzees, and hunting in wild hamadryas baboons.

##### Graduation with Distinction (Senior Thesis) Committee Member

Served on senior thesis committee for three students.

##### Faculty Advisor

- House Course: *Interdisciplinary Approaches to Conservation Action* (Student run course) – Spring 2011
- *The Role of Undergraduates in Primate Conservation: working group* – Spring 2010

### **Fellowships and Awards**

2012 Thompson Writing Program Research Grant (Duke University)  
 2009-2011 Evolutionary Anthropology Mentorship Awards (Duke University)  
 2008-2009 Post-Doctoral Fellowship, Thompson Writing Program (Duke University)  
 2006-2008 CUNY Writing Fellowship  
 2002-2004 Graduate Teaching Fellowship (CUNY)  
 2002-2008 Sue Rosenberg Zalk Travel and Research Grant (CUNY)

1999-2004	University Fellowship (The Graduate Center, CUNY)
1999-2002	New York Consortium in Evolutionary Primatology Fellowship
2000	Summer Fellowship (The Graduate Center, CUNY)
1998	Undergraduate Research Fellowship (Cornell University)

### **Ad Hoc Journal Reviewer**

American Journal of Primatology  
American Journal of Physical Anthropology  
International Journal of Primatology  
Yearbook of Physical Anthropology  
Movement Ecology  
Functional Ecology  
International Journal of Biodiversity and Conservation  
PLOS One  
Prompt

### **Grant Reviewer**

Leakey Foundation  
Association of Zoos and Aquariums  
Strasbourg Institute of Advanced Study  
Denver Zoo

### **Textbook Reviewer**

*Animal Behavior*, Oxford University Press  
*The Human Species*, Oxford University Press

### **Professional Service**

#### **Regis University, 2012-present**

- Rank and Tenure Committee
- URSC Committee Chair
- Study Abroad Advisory Committee
- Academic Policy and Standards Committee
- Travel Learning Committee
- Faculty Senate Representative
- Pre-Major and Major Advisor
- Tribeta Biology Honor Society Advisor
- Biology Department Representative/Coordinator for Visit Days and Scholarship Weekend
- Environmental Sciences Advisory Committee
- Environmental Biology Search Committee
- Biology Department Search Committees
- Sophomore IN Mentoring Program
- Thematic Major Committee
- Council of Undergraduate Research university representative

#### **Duke University, 2009-2012**

- Pre-Major Advisor

- Steering Committee – Thompson Writing Program
- Forum for Teaching Science-Based Writing Courses
- Course Goals and Practices Committee – Thompson Writing Program
- Course Curriculum Committee – Thompson Writing Program
- Writing in the Natural Sciences Committee – Thompson Writing Program
- *Deliberations* Editorial Board – A journal of first-year writing at Duke University
- University Writing Tutors Mentor

#### **Professional Association Service**

- *American Association of Physical Anthropologists (AAPA) Program Committee 2017-2018* – Reviewed abstracts for national conference in Austin, TX April 2018
- *International Primatological Society (IPS) Program Committee 2018* – Reviewed abstracts for international conference in Nairobi, Kenya August 2018
- *Rocky Mountain Biological Anthropology Association (RMBAA) Planning Committee 2019–2021* – Work with colleagues from throughout the Rocky Mountain Region (i.e., Metro, UNC, CU Boulder, CU Anschutz, University of Wyoming) to develop regional Biological Anthropology association. One of our primary goals is to provide a forum for undergraduates to present their research and network with local biological anthropologists. We aim to host our inaugural Annual Meeting in Fall 2022.

#### **Professional Society Memberships and Affiliations**

American Association of Physical Anthropologists

American Society of Primatologists

Animal Behavior Society

International Primatological Society

Filoha Hamadryas Project

Maderas Rainforest Conservancy