

# Randi H Griffin, PhD

- Recent PhD with 9 years experience translating data into insights
- R expert, comfortable in Python and MySQL
- Strong background in social and biological sciences
- Team player, creative problem solver, clear communicator

## EDUCATION

### **Duke University, NC, PhD in Biological Anthropology** — graduated May 2018

Instructor for data analysis workshops for faculty and grad students, leading modules on data cleaning, visualization, and modeling in R

### **Harvard University, MA, BA in Human Evolutionary Biology, cum laude** — graduated May 2010

Cambridge public schools tutor, 4 years varsity women's ice hockey

## PROJECTS ON GITHUB

### **PhD dissertation on skull shape evolution**

Extracted shape data from CT scans of primate skulls and modeled skull shape evolution in 3D using multivariate GLMMs, cluster analysis, and multivariate ordination. <https://github.com/rgriff23/Dissertation>

### **Scraping and analyzing data Olympic history**

Scraped historical data on 135k Olympians from [www.sports-reference.com](http://www.sports-reference.com) and analyzed historical trends in the number of athletes and events, participation of women, geographic representation, and athlete characteristics. [https://github.com/rgriff23/Olympic\\_history](https://github.com/rgriff23/Olympic_history)

### **Twitterstorm analysis with `twitter`**

Compiled data on 4.5k users and 5k tweets, used social network analysis and sentiment analysis to characterize the storm. [https://github.com/rgriff23/Katie\\_Hinde\\_Twitter\\_storm\\_text\\_analysis](https://github.com/rgriff23/Katie_Hinde_Twitter_storm_text_analysis)

### **Spatial ecology of mosquito communities**

Analyzed spatial distribution of mosquitoes in NC using GLMMs and multivariate ordination. [https://github.com/rgriff23/Mosquito\\_ecology](https://github.com/rgriff23/Mosquito_ecology)

### **Eco-epidemiology of tapeworms in monkeys**

Analyzed longitudinal data to assess the distribution and health impacts of tapeworms in monkeys using survival analysis. [https://github.com/rgriff23/Gelada\\_parasites](https://github.com/rgriff23/Gelada_parasites)

### **R package 'btw' for Bayesian evolutionary models**

Authored package to run executable program BayesTraits from R using OS commands. Functions import and process BayesTraits output into convenient formats for further analysis. <https://github.com/rgriff23/btw>

### **Simulation studies to evaluate published methods**

Assessed the performance of two recently published statistical methods in evolutionary biology. [https://github.com/rgriff23/Evaluating\\_IE](https://github.com/rgriff23/Evaluating_IE)  
[https://github.com/rgriff23/Evaluating\\_mvBM](https://github.com/rgriff23/Evaluating_mvBM)

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## SKILLS

**Coding:** Proficient in R/R Markdown & git/GitHub; familiar with Python, MySQL, HTML/CSS, UNIX, Perl

**Data analysis-** Generalized linear mixed effects models, GIS, network analysis, survival models, multivariate ordination, text analysis, agent-based models, Bayesian methods

**Data collection-** Web scraping, mining social media (e.g., Twitter)

## HONORS & AWARDS

**Kaggle weekly Kernel Awards winner for analysis of survey data, June 15, 2018 (\$1000).**  
<https://www.kaggle.com/heesoo37/stack-overflow-2018-survey-age-gender-sexuality/notebook>

**National Science Foundation Graduate Research Fellowship,** 2015, 12% applicant success rate

**James B. Duke Fellowship,** 2013, nominated and awarded by faculty

## PERSONAL INTERESTS

**STEM outreach,** Science coach for Duke's BOOST Program aimed at encouraging underrepresented groups to pursue careers in STEM

**Youth ice hockey coach,** 2010-16, Level 4 certified USA Hockey coach

**South Korean Women's Ice Hockey National Team,** 2015-pres, 2018 Winter Olympics

## PUBLICATION HISTORY

1. Schneider-Crease, I.A., **Griffin, R.H.**, Gomery, M.A., Bergman, T.J., and J.C. Beehner. 2017. High mortality associated with parasitism in geladas (*Theropithecus gelada*) in the Simien Mountains National Park, Ethiopia. *American Journal of Primatology*, 79(9).
2. Schneider-Crease, I.A., **Griffin, R.H.**, Dorny, P., Noh, J.C., Handali, S., Chastain, H.M., Wilkins, P.P., Nunn, C.L., Snyder-Mackler, N., Beehner, J.C., and T.J. Bergman. 2017. Identifying wildlife reservoirs of neglected taeniid tapeworms: non-invasive diagnosis of endemic *Taenia serialis* infection in wild primates. *PLOS Neglected Tropical Diseases*, 11(7): p.e0005709.
3. **Griffin, R.H.**, and G.S. Yapunich. 2017. A critical comment on the ‘multiple variance Brownian motion’ model of Smaers et al. (2016). *Biological Journal of the Linnean Society*, 121(1): 223-228.
4. Reiskind, M., **Griffin, R.H.**, Janairo, M.S., and K.A. Hopperstad. 2016. Mosquitoes of Field and Forest: The Scale of Habitat Segregation in a Diverse Mosquito Assemblage. *Medical and Veterinary Entomology*, 31(1): 44-54.
5. **Griffin, R.H.**, and G.S. Yapuncich. 2015. The Independent Evolution method is not a viable phylogenetic comparative method. *PLoS ONE* 10(12):e0144147.
6. Coburn, R.A., **Griffin, R.H.**, & S.D. Smith. 2015. Genetic basis for a rare floral mutant in an Andean species of Solanaceae. *American Journal of Botany* 102(2):264-272.
7. Young, H., **Griffin, R.**, Wood, C.L., and Nunn, C.L. 2013. Does habitat disturbance increase infectious disease risk for primates? *Ecology Letters*, 16(5): 656-663.
8. Cooper, N., **Griffin, R.**, Franz, M., Omotayo, M., and Nunn, C.L. 2012. Phylogenetic host specificity and understanding parasite sharing in primates. *Ecology Letters* 15(12): 1370-77.
9. **Griffin, R.H.**, Matthews, L.J., and Nunn, C.L. 2012. Evolutionary Disequilibrium and Activity Period in Primates: A Bayesian Phylogenetic Approach. *American Journal of Physical Anthropology* 147:409-416.
10. **Griffin, R.H.** and Nunn, C.L. 2011. Community structure and the spread of infectious disease in primate social networks. *Evolutionary Ecology* 26(4):779-800.