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Department of Ecology and Evolutionary Biology
University of Colorado, Boulder

EDUCATION

- 2001-2006 BA, University of Colorado, Boulder, EPOB and HIST
2006-2008 MA, University of Colorado, Boulder, EEB
2008-present PhD, University of Colorado, Boulder, EEB Advisor: Dr. Robert P. Guralnick
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PUBLICATIONS

- 2009 Guralnick RP and Hill AW. Biodiversity informatics: Automated approaches for documenting global biodiversity patterns and processes. *Bioinformatics*. 25(4):421-428.
- Hill AW, Guralnick RP, Wilson MJC, Habib F, Janies D. Evolution of drug-resistance in multiple distinct lineages of H5N1 avian influenza. *Infection, Genetics, and Evolution* 9(2):169-178.
- 2008 Schmidt SK, Reed SC, Nemergut DR, Grandy AS, Cleveland CC, Weintraub MN, Hill AW, Costello EK, Meyer AF, Martin AM, Neff JC. The earliest stages of microbial ecosystem succession in high-elevation, recently deglaciated soils. *Proceedings B* 275(1653):2793-2802.
- Hill AW, Guralnick RP. Distributed systems and automated biodiversity informatics: Genomic analysis and geographic visualization of disease evolution. In A. Gray, K. Jeffery, and J. Shao (Eds.) British National Conference on Databases. Springer-Verlag Lecture Notes in Computer Science series 5071, pp. 270-279. Berlin & Heidelberg.
- Janies D, Habib F, Alexandrov B, Hill AW, Pol D. Evolution of genomes, host shifts, and geographic spread of SARS-CoV and related coronaviruses. *Cladistics* 23:1-20.
- 2007 Guralnick RP, Hill AW, Lane M. Towards a collaborative, global infrastructure for biodiversity assessment. *Ecology Letters* 10:663-672.
- Janies D, Hill AW, Guralnick RP, Habib F, Waltari E, Wheeler WC. Genomic analysis and geographic visualization of the spread of Avian Influenza (H5N1). *Systematic Biology* 56(2):321-329.
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GRANTS

- 2008 GBIF Seed Grant. \$50,000 total, \$25,000 for CU. "A system for increasing the georeferencing quantity and quality of all GBIF-mediated occurrence records". PI Reed Beaman (FLMNH), Co-PIs Robert Guralnick (CU), Andrew Hill (CU), Aimee Stewart (KU), Paul Flemons (AU).
- 2007 Walker Van Riper CU Museum Grant. \$1500, "Developing integrated analysis solutions for a data-rich world".
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RESEARCH AND PROFESSIONAL EXPERIENCE

- 2008-present Research Assistant, U. of Colorado (EEB). Robert Guralnick.
- 2008 Research Assistant, U. of Colorado (EEB). Steve Schmidt and Robert Guralnick. *(Spring)*
- Research Assistant, Novel Analytical and Empirical Approaches to the Origin and Prediction of Pathogenicity. Columbus, OH, and Boulder, CO. Daniel Janies and Robert Guralnick *(06-08)*
- 2007 Research Assistant, U. of Colorado (EEB). Steve Schmidt and Robert Guralnick. *(Fall)*
- Graduate Assistant, U. of Colorado Natural History Museum. G. Hall and M. Kageyama. *(Spring)*
- 2006 Visualization and Development Assistant, The Timoney Group. Denver, CO, Brian Timoney.
- Independent Research, Novel Visualization Tools for Biological Sciences. Boulder, CO. Robert Guralnick
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PRESENTATIONS

- 2008 BioGeobif Project Overview *(Presentation)*
Geospatial Interest Group, TDWG Annual Conference.
- BioGeobif: Automated Georeferencing Using BioGeomancer *(Poster)*
Biodiversity Information Standards, TDWG Annual Conference.
- Distributed Systems and Automated Biodiversity Informatics *(Presentation)*
BNCOD, Biodiversity Informatics Workshop. *Best Paper recognition*
- 2007 Genomic Analysis and Geographic Visualization of H5N1 and Sars-CoV *(Poster)*
AMIA 2007 Annual Symposium. *Distinguished Poster Award*
- Reducing Turnaround Time in Analysis and Visualization of Infectious Disease Spread *(Poster)*
Phyloinformatics Workshop, e-Science Institute
- Biodiversity Analysis Tomorrow and Beyond *(Presentation)*
GBIF Science Symposium 5 *(invited)*
- Geospatial Analysis of Pandemic Influenza *(Presentation)*
Force Health Protection Conference, US Joint Services *(invited)*
- Avian Influenza Geography and Genomics *(Presentation)*
US Joint Services Briefing on Pandemic Preparedness, United States Pentagon *(invited)*
- Avian Influenza Geography and Genomics *(Presentation)*
Conference on Pandemic Preparedness. Harvard Business School *(invited)*
- Phylogenomic Analysis of Infectious Diseases *(Poster)*
Ohio Collaborative Conference on Bioinformatics, Miami University *(lead: Boyan Alexandrov)*

2006 Scientific Study in Virtual Globes (*Presentation*)
National Center for Atmospheric Research. 2 Talks (*invited*)

Trees in Space (*Presentation*)
First Annual Virtual Globe Scientific Users Conference.

Using Google Earth Mashups to Examine H5N1 Influenza Emergence (*Presentation*)
Evolution 2006, SSE.

TEACHING EXPERIENCE

2006 Invertebrate Diversity. Teaching Assistant. Website: <http://andrewxhill.googlepages.com/invert>
University of Colorado. 5.57/6.00 FCQ Rating

2005 SAT and LSAT Prep. Courses. Instructor. The Princeton Review.

WEB APPLICATIONS

Conservation Code Project: biodiversity.colorado.edu/bi/

BioGeobif - Automated georeferencing of GBIF records: biodiversity.colorado.edu/bgb/

Automated phylogenetic analysis of influenza: biodiversity.colorado.edu/ipl/

PROFESSIONAL AFFILIATIONS

Taxonomic Database Working Group (TDWG)

PRESS AND INTERNET COVERAGE

2009 "Tamiflu usage against avian flu could backfire", Rocky Mountain News.
"Drugs' effect on bird flu doubted", Denver Post.

2008 "BNCOD 2008 Workshop", iPhylo.

2007 "Tuesday map: Google Earth does bird flu", Foreign Policy.
"Avian flu: Seeing the big picture", MIT Technology Review.
"Google map tracks avian flu", Denver Post.
"Mapping the phylogeny of avian flu in Google Earth", Ogle Earth.
"'Supermap' of avian flu yields new info on source and spread", Science Daily.
