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Gwen S. Antell

Education

DPhil, *University of Oxford*, UK. **2017–Present**
Department of Earth Sciences
B.S. Science, *Yale University*, USA, *magna cum laude*. **2012–2016**
Ecology & Evolutionary Biology and Geology & Geophysics

PhD thesis

Title: *Macroecological consequences of biotic competition and abiotic resource limitation in marine invertebrate communities*
Supervisors: Erin E. Saupe (Earth Sciences) & Tim Coulson (Zoology)
Research interests:

- Species' geographic distribution and niche dynamics
- Invertebrate palaeontology and palaeo-ecology
- Biodiversity across spatial, temporal, and taxonomic scales

Employment

Graduate instructor, *Earth Sciences*, Oxford. **2017–Present**
Labs, tutorials, and field courses about evolution and past environments.
Geoscientists-in-the-Parks Intern, *US National Park Service, Geologic Resources Division*, Florissant, Colorado. **2016–2017**
Collections Assistant, *Yale Peabody Museum of Natural History*, New Haven, Connecticut. **2013–2016**

Leadership

- St John's College, Middle Common Room Committee, **President** 2018–2019, **Diversity officer** 2017–2018
- **Women's Leadership Forum discussion leader**, St John's College, February–March 2018
- **Representative** for Earth Sciences postgraduates, Divisional Joint Consultative Committee, 2018–2019
- **Representative** for postgraduate women, Workplace and Equality Committee, Dept. of Earth Sciences, U. of Oxford, 2017–2019
- Yale Ecology and Evo. Bio. Group, 2013–2016, **President** 2015–2016
- Connecticut Entomological Society, 2013–2016, **Secretary** 2015–2016

Publications |

- [1] Simon AF Darroch et al. "High preservation potential of geographic range size distributions in deep time". In: American Naturalist (in revision).
- [2] Gwen S Antell et al. "Marine biodiversity and geographic distributions are independent on large scales". In: Current Biology 30.1 (2020), pp. 115–121.
- [3] Gwen S Antell. "Digitization reveals and remediates challenges to research on dispersed museum collections from Florissant fossil beds, Colorado". In: Museums at the Forefront of the History and Philosophy of Geology: History Made, History in the Making. Geological Society of America Special Volume 535 (2018), pp. 301–309.
- [4] Gwen S Antell and Jeyaraney Kathirithamby. "The First Twisted-wing Parasitoids (Insecta: Strepsiptera) from the Early Eocene Green River Formation of Colorado". In: Bulletin of the Peabody Museum of Natural History 57.2 (2016), pp. 165–174.

Oral presentations |

- [5] Gwen S Antell et al. "No patterns of ecological release in brachiopod and bivalve distributions over the Phanerozoic". In: North American Paleontological Convention, **1st place student talk**. 2019.
- [6] Gwen S Antell. "Game of Biomes: The contest for world domination after biotic catastrophe". In: Oxford Geology Group, Paleontology Symposium, **invited student speaker**. 2019.
- [7] Gwen S Antell et al. "Geographic distributions of benthic invertebrate species are diversity-dependent across the Phanerozoic". In: Crossing the Palaeontological-Ecological Gap, **commended student talk**. 2018.
- [8] Gwen S Antell et al. "Geographic distributions of benthic invertebrate species are diversity-dependent across the Phanerozoic". In: International Palaeontological Congress. 2018.
- [9] Gwen S Antell. "Exoskeletons in the closet: new fossil insect species from the drawers of the Yale Peabody Museum". In: Yale Peabody Museum 150th Anniversary Symposium, **one of 10 invited alumni speakers**. 2016.
- [10] Gwen S Antell and Herbert W Meyer. "Fossils from the frontier: Decades of museum influence on the paleontology of the Florissant fossil beds, Colorado". In: Geological Society of America Annual Meeting. 2016.
- [11] Gwen S Antell and K J Mertes. "Niche partitioning in East African Hornbills along behavioral, dietary, movement, and habitat axes". In: Ecological Society of America. 2016.
- [12] Gwen S Antell and K J Mertes. "A coexistence story: East African Hornbill niche partitioning". In: Pierson College Mellon Forum. 2016.
- [13] Gwen S Antell. "An old twist on a new problem: Inferring the paleodistribution of the parasite Caenocholax (Strepsiptera: Myrmecolacidae) from a new fossil discovery". In: Geological Society of America. 2015.
- [14] Gwen S Antell. "Stone flies and rock crawlers: Fossil insects from the Eocene". In: Connecticut Entomological Society, **1st place student speed talk**. 2015.

Awards	
<i>Scholarships</i>	<div>Clarendon Fund Scholarship2017–Present</div> <div>NSF Graduate Research Fellowship Program (declined)2017</div> <div>Jerry (1953) and Jackie Inskeep Scholarship Fund2013-2016</div> <div>Summer Environmental Fellowship (\$1,300)2014</div> <div>US National Merit Scholarship (\$2,500)2012</div>
<i>Grants</i>	<div>Burdett-Coutts Grant, Earth Sciences, U. of Oxford (£1,650)2019</div> <div>Postgraduate Special Grant, St John's College (£1,250)2018</div> <div>Travel Grant, Palaeontological Association (£300)2018</div> <div>E. Myer Grant, Harvard Museum of Comparative Zoology (\$1,100)2016</div> <div>Pierson College Richter Fellowship2015</div> <div>Yale Science Center Int'l Fellowship (\$3,870; \$4,300)2014, 2015</div> <div>Yale Freshmen Summer STEM Research Fellowship (\$4,300)2013</div>
<i>Awards</i>	<div>1st place student talk, N. Am. Palaeo. Convention2019</div> <div>D. E. Chantler Award: 'strength of character', Yale U.2016</div> <div>W. R. Belknap Prize: excellence in a biology thesis, Yale U.2016</div> <div>1st place student speed talk, Connecticut Entomological Society2015</div>
Skills	
<i>Software</i>	<div>○ ArcGIS○ R</div> <div>○ Photoshop○ LaTeX</div> <div>○ Illustrator○ Microsoft Office</div>
<i>Statistics</i>	<div>○ Species distribution models</div> <div>○ Generalised, mixed-effects, & phylogenetic regression</div> <div>○ Bayesian inference, including RevBayes</div> <div>○ Non-parametric and bootstrapping methods</div>
<i>Field techniques</i>	<div>○ GPS navigation○ Cartography</div> <div>○ Quadrats & transects○ Photogrammetry</div> <div>○ Bird banding○ Plant, insect, & fossil collection</div>
<i>Museum curation</i>	<div>○ Specimen cataloguing, georeferencing, and imaging</div> <div>○ Plaster casts and moulds of fossils</div> <div>○ Insect pinning and identification</div>

Field work

Postgraduate instructor: Earth Sciences undergraduate field course. Isle of Arran, UK. 1 week, 2019

Postgraduate instructor: Earth Sciences undergraduate field course. Dorset, UK. 1 week, 2018, 2019

Stratigraphic paleobiology: Paleo. Society postgraduate field course. Bitterroot Mountains, MT, USA. 2 weeks, 2017

Global tectonics: Yale U. course. Sicily, Italy. 2 weeks, 2016

Wildlife research: Lale'enok Resource Centre, Kenya. 2 months, 2015

Sedimentary geology: Yale U. course. Barbados. 2 weeks, 2015

Wildlife research: Mpala Research Centre, Kenya. 3 months, 2014

Training and workshops

Wilderness First Responder: 80-hour medical certificate in emergency response, maintained valid June 2017–present

University teaching: University of Oxford, 20 Feb 2019

Science communication for children: Oxford University Museum of Natural History, 25 Feb 2019

STEM Ambassador training: University of Oxford, 23 Jan 2019

RevBayes Bayesian phylogenetic inference: University of Bristol, 1–3 May 2018

Mixed-effects models and smart modelling techniques in R: University of Oxford, 17–20 Apr 2018

Access and outreach

- Report author, 'Recommendations for improving racial equality, diversity, and inclusion in the Department of Earth Sciences, University of Oxford', February 2020. Member of ad hoc working group on BAME issues.
- 'Science Short' outreach presentation, Oxford University Museum of Natural History, 4 January 2020
- Super Science Saturday activity leader, Oxford University Museum of Natural History, 9 March 2019. 3600 attendees
- UNIQ summer school instructor, Oxford Earth Sciences; 2018, 2019
- International Association of Geoscience Diversity, member 2018–Present
- Oxford Disability Law and Policy Conference, 24–25 February 2018
- Oxford ApplyED (Equality and Diversity) conference, 14 November 2017

Advocacy

Edinburgh Marathon: £750 raised for the Juvenile Diabetes Research Foundation. Sub 4-hour finishing time. 25 May 2019

March For Science: Support of the American Geophysical Union and Paleontological Society. Activity leader for the Museum of Natural History, UC Boulder. Denver 2017, London 2018

Tough Mudder: \$1,200 raised for the American Diabetes Association. 10-mile obstacle course and mud run. Sacramento, CA, USA. 2017