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Gwen S. Antell

Education

DPhil, *University of Oxford*, UK. **2017–Present**
Departments of Earth Sciences and Zoology
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

- Working group on racial equality, diversity, and inclusion in Department of Earth Sciences, University of Oxford, **Co-chair** 2019-2020
- St John's College, Middle Common Room Committee (graduate student body), **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

Peer-reviewed publications

- [1] **Antell, Gwen S**, Isabel S Fenton, Paul J Valdes, and Erin E Saupe. "Thermal niches of planktonic foraminifera are static throughout glacial-interglacial climate change". In: (Submitted).
- [2] Simon AF Darroch, Michelle Casey, **Antell, Gwen S**, Amy Sweeney, and Erin E Saupe. "High preservation potential of paleogeographic range size distributions in deep time". In: *American Naturalist* (2020).
- [3] **Antell, Gwen S**, Wolfgang Kiessling, Martin Aberhan, and Erin E Saupe. "Marine biodiversity and geographic distributions are independent on large scales". In: *Current Biology* 30.1 (2020), pp. 115–121.
- [4] **Antell, Gwen S**. "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.
- [5] **Antell, Gwen S** and Jeyarane 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.

Talks

- [1] Gwen S Antell, Wolfgang Kiessling, Martin Aberhan, and Erin E Saupe. "No patterns of ecological release in brachiopod and bivalve distributions over the Phanerozoic". In: *North American Paleontological Convention, 1st place student talk*. 2019.
- [2] Gwen S Antell. "Game of Biomes: The contest for world domination after biotic catastrophe". In: *Oxford Geology Group, Paleontology Symposium, invited student speaker*. 2019.
- [3] Gwen S Antell, Wolfgang Kiessling, Martin Aberhan, and Erin E Saupe. "Geographic distributions of benthic invertebrate species are diversity-dependent across the Phanerozoic". In: *Crossing the Palaeontological-Ecological Gap, commended student talk*. 2018.
- [4] Gwen S Antell, Wolfgang Kiessling, Martin Aberhan, and Erin E Saupe. "Geographic distributions of benthic invertebrate species are diversity-dependent across the Phanerozoic". In: *International Palaeontological Congress*. 2018.
- [5] 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.
- [6] 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.
- [7] Gwen S Antell and Katherine J Mertes. "Niche partitioning in East African Hornbills along behavioral, dietary, movement, and habitat axes". In: *Ecological Society of America*. 2016.
- [8] 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.
- [9] 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 Scholarship 2017–Present</div> <div>St John's College Alumni Scholarship 2017–Present</div> <div>NSF Graduate Research Fellowship Program (declined) 2017</div> <div>Jerry (1953) and Jackie Inskeep Scholarship Fund 2013-2016</div> <div>Summer Environmental Fellowship, Yale U. 2014</div> <div>US National Merit Scholarship 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 Fellowship 2015</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>Earth Sciences award for equality, diversity, & inclusion work 2020</div> <div>1st place student talk, N. Am. Palaeo. Convention 2019</div> <div>D. E. Chantler Award for "strength of character," Yale U. 2016</div> <div>W. R. Belknap Prize for excellence in a biology thesis, Yale U. 2016</div> <div>1st place student speed talk, Connecticut Entomological Society 2015</div>
Skills	
<i>Software</i>	<div>○ R</div> <div>○ LaTeX</div> <div>○ Photoshop</div> <div>○ Illustrator</div> <div>○ Git</div> <div>○ Bash</div> <div>○ ArcGIS</div> <div>○ 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</div> <div>○ Quadrats & transects</div> <div>○ Live-dead analysis</div> <div>○ Bird banding</div> <div>○ Cartography</div> <div>○ Photogrammetry</div> <div>○ Stratigraphic measurement</div> <div>○ Plant, insect, & fossil collection</div>

<p>Field work</p>	<p>Postgraduate instructor: Earth Sciences undergraduate field course. Isle of Arran, UK. 1 week, 2019, 2020 (cancelled due to COVID-19)</p> <p>Postgraduate instructor: Earth Sciences undergraduate field course. Dorset, UK. 1 week, 2018, 2019</p> <p>Stratigraphic paleobiology: Paleo. Society postgraduate field course. Bitterroot Mountains, MT, USA. 2 weeks, 2017</p> <p>Global tectonics: Yale U. course. Sicily, Italy. 2 weeks, 2016</p> <p>Wildlife research: Lale'enok Resource Centre, Kenya. 2 months, 2015</p> <p>Sedimentary geology: Yale U. course. Barbados. 2 weeks, 2015</p> <p>Wildlife research: Mpala Research Centre, Kenya. 3 months, 2014</p>
<p>Training and workshops</p>	<p>Wilderness First Responder: 80-hour medical certificate in emergency response, maintained valid June 2017–present</p> <p>University teaching: University of Oxford, 20 Feb 2019</p> <p>Science communication for children: Oxford University Museum of Natural History, 25 Feb 2019</p> <p>STEM Ambassador training: University of Oxford, 23 Jan 2019</p> <p>RevBayes Bayesian phylogenetic inference: University of Bristol, 1–3 May 2018</p> <p>Mixed-effects models and smart modelling techniques in R: University of Oxford, 17–20 Apr 2018</p>
<p>Access and outreach</p>	<ul style="list-style-type: none"> ○ Report author, "Recommendations for improving racial equality, diversity, and inclusion in the Department of Earth Sciences, University of Oxford," February 2020. Available at https://www.earth.ox.ac.uk/2020/06. ○ "Science Short" invited 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, February 2018 ○ Oxford ApplyED (Equality and Diversity) conference, November 2017

References

Erin Saupe - PhD Supervisor

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