

# Gwen S. Antell

## Education

**DPhil**, *University of Oxford*, UK. **2017–Present**

Departments of Earth Sciences and Zoology

**B.S.**, *Yale University*, USA, *magna cum laude*. **2012–2016**

Ecology & Evolutionary Biology (with distinction) and Geology & Geophysics

## PhD thesis

**Title:** *Macroecological consequences of biotic and abiotic factors in marine communities through time*

**Supervisors:** Erin Saupe (Earth Sciences) & Tim Coulson (Zoology)

**Research interests:**

- Invertebrate paleontology and paleoecology
- Inferential statistics on time series and multivariate data
- Biodiversity across spatial, temporal, and taxonomic scales

## Employment

**Graduate teaching assistant**, *Earth Sciences*, Oxford. **2017–Present**

Labs, tutorials, and field courses about evolution and past environments.

**Geoscientists-in-the-Parks Intern**, *US National Park Service*, **2016–2017**

*Geologic Resources Division*, Florissant National Monument, CO.

Research, exhibit design, and geoheritage resource surveys.

**Collections Assistant**, *Yale Peabody Museum of Natural History*, **2013–2016**

*Invertebrate Paleontology Division*, New Haven, CT.

Described new fossil species, cataloged specimens, and hosted public tours.

## Leadership

**Divisional Equality, Diversity, & Inclusion Fellow:** serving the STEM division EDI Steering Group and contributing to Oxford's 3-year strategic plan, 2020–2021.

**Co-chair:** Working group on racial diversity and inclusion in Earth Sciences Dept., Oxford, 2019–2020. Co-authored report of 42 action item recommendations.

**Representative for graduate students:** Equality Committee, Earth Sciences Dept., Oxford, 2017–Present. Changed policies and liaised with students.

**Representative for Earth Sciences:** Divisional Joint Consultative Committee, representing graduate student interests, 2018–2020.

**President:** St John's College, Middle Common Room Committee (graduate student body), 2018–2019; **Disabled students' officer** 2017–2018.

**Women's Leadership Forum facilitator:** St John's College grad. students, 2018.

**President:** Yale Ecology and Evo. Bio. Group, 2015–2016; member 2013–2016.

## Publications |

- [1] **G Antell**, I Fenton, P Valdes, and E Saupe. "Thermal niches of planktonic foraminifera are static throughout glacial-interglacial climate change". In: *Proceedings of the National Academy of Sciences* 118.18 (2021). DOI: 10.1073/pnas.2017105118.
- [2] S Darroch, M Casey, **G Antell**, A Sweeney, and E Saupe. "High preservation potential of paleogeographic range size distributions in deep time". In: *American Naturalist* 196.4 (2020), pp. 454–471. DOI: 10.1086/710176.
- [3] **G Antell**, W Kiessling, M Aberhan, and E Saupe. "Marine biodiversity and geographic distributions are independent on large scales". In: *Current Biology* (2020). DOI: 10.1016/j.cub.2019.10.065.
- [4] **G Antell**. "Digitization reveals and remediates challenges to research on dispersed museum collections from Florissant fossil beds, Colorado". In: *Geological Society of America Special Volume* 535 (2018), pp. 301–309. DOI: 10.1130/2018.2535(20).
- [5] **G Antell** and J 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. DOI: 10.3374/014.057.0204.

## Conference talks |

- [1] G Antell, I Fenton, P Valdes, and E Saupe. "Thermal niches of planktonic foraminifera are static throughout glacial-interglacial climate change". In: *Geological Society of America, **Future Leaders in Paleontology** awarded session, **1st place student talk in Geobiology***. 2020.
- [2] G Antell, W Kiessling, M Aberhan, and 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.
- [3] G Antell. "Game of Biomes: The contest for world domination after biotic catastrophe". In: *Oxford Geology Group, Paleontology Symposium, **invited student speaker***. 2019.
- [4] G Antell, W Kiessling, M Aberhan, and E Saupe. "Geographic distributions of benthic invertebrate species are diversity-dependent across the Phanerozoic". In: *Crossing the Palaeontological-Ecological Gap, **commended student talk***. 2018.
- [5] G Antell, Kiessling, Aberhan, and Saupe. "Geographic distributions of benthic invertebrate species are diversity-dependent across the Phanerozoic". In: *International Palaeontological Congress*. 2018.
- [6] G Antell and H Meyer. "Fossils from the frontier: Decades of museum influence on the paleontology of the Florissant fossil beds, Colorado". In: *Geological Society of America*. 2016.
- [7] G Antell and K Mertes. "Niche partitioning in East African Hornbills along behavioral, dietary, movement, and habitat axes". In: *Ecological Society of America*. 2016.
- [8] G Antell. "An old twist on a new problem: Inferring the paleodistribution of the parasite *Caenocholax* (Strepsiptera) from a new fossil discovery". In: *Geological Society of America*. 2015.

<b>Awards</b> <i>Scholarships</i>	Clarendon Fund Scholarship	2017–Present
	St John's College Alumni Scholarship	2017–Present
	NSF Graduate Research Fellowship Program (declined)	2017
	Jerry (1953) and Jackie Inskeep Scholarship Fund	2013–2016
	Summer Environmental Fellowship, Yale	2014
	US National Merit Scholarship	2012
<b>Grants</b>	Burdett-Coutts Grant, Earth Sciences, of Oxford (£1,650)	2019
	Postgraduate Special Grant, St John's College (£1,250)	2018
	Travel Grant, Palaeontological Association (£300)	2018
	E. Myer Grant, Harvard Museum of Comparative Zoology (\$1,100)	2016
	Yale Science Center Int'l Fellowship (\$3,870; \$4,300)	2014, 2015
	Yale Freshmen Summer STEM Research Fellowship (\$4,300)	2013
<b>Awards</b>	1st place student talk in Geobiology & Geomicrobiology, GSA meeting	2020
	Earth Sciences award for equality, diversity, & inclusion work	2020
	1st place student talk, North American Paleo. Convention	2019
	D. E. Chantler Award for “the Yale Senior who has best exemplified qualities of courage, strength of character, and high moral purpose”	2016
	W. R. Belknap Prize for excellence in a biology thesis, Yale	2016
	1st place student speed talk, Connecticut Entomological Society	2015
<b>Professional training</b>	<b>Teaching certification:</b> SEDA Supporting Learning award in higher education (Descriptor 1 of UK Professional Standards Framework), 2020.	
	<b>Science communication and science policy:</b> “Reclaiming STEM” 4-part workshop series, run by and for minorities in STEM. Held remotely, 2020.	
	<b>Wilderness First Responder:</b> 80-hour emergency medicine certification with wilderness upgrade, maintained valid 2017–Present.	
	<b>Science communication for children:</b> Oxford University Museum of Natural History, workshop attended 25 Feb 2019.	
	<b>STEM Ambassador training:</b> University of Oxford, workshop 23 Jan 2019.	
	<b>University teaching:</b> University of Oxford, workshop attended 20 Feb 2019.	
	<b>RevBayes Bayesian phylogenetic inference:</b> U. Bristol, 1–3 May 2018	
<b>Software</b>	<b>Mixed-effects models and smart modelling techniques in R:</b> University of Oxford, 17–20 Apr 2018	
	Developer of <i>kerneval</i> R package for kernel density estimation [link]	

## Invited talks

**Research seminar:** Sheffield University ecology & conservation series, May 2021

**Research seminar:** Yale Earth and Planetary Sciences seminar series, May 2021.

**Research seminar:** Harvard paleobiology joint lab groups (Museum of Comparative Zoology and Dept. Organismic & Evolutionary Bio.), Nov 2020.

**EDI talk:** "Decolonizing ecology and conservation science," Zoological Society of London (Feb 2021) and Oxford Zoology Dept. (July 2020).

**Public lecture:** "Science Short" research talk on climate change and ocean life, Oxford University Museum of Natural History, 4 January 2020.

**Alumni speaker:** Yale Peabody Museum 150th Anniversary Symposium. One of two recent student graduate speakers, Verrill Medal symposium, 2016.

## Outreach & advocacy

**Biology LGBTQ+ Network:** Co-organiser for 2020 LGBT STEM Day symposium at Oxford (cancelled due to COVID-19). £1,000 in grant funding acquired.

**Student representative:** Departmental committees for Equality, Graduate Students, and Teaching; divisional committee for Graduates; 2017–Present. Graduate President on all St John's College committees, 2017–2018.

**Report author & panelist:** Recommendations on racial & ethnic EDI in Earth Sciences Dept., Oxford, 2020. Available at <https://www.earth.ox.ac.uk/2020/06>.

**Activity leader:** Super Science Saturday, Oxford University Museum of Natural History, 9 March 2019. Ran activity booth with estimated 3,600 attendees.

**Instructor:** UNIQ summer school, Oxford broadening access program; 2018, 2019. Designed classroom activities and assistant taught a local geology fieldtrip.

**Edinburgh Marathon:** £750 raised for the Juvenile Diabetes Research Foundation, as an athlete with juvenile (type 1) diabetes. Sub 4-hour finishing time. May 2019.

**March For Science:** Activity leader for the CU Boulder Museum of Natural History, Denver 2017. Support of the American Geophysical Union, London 2018.

**Tough Mudder:** \$1,200 raised for American Diabetes Assoc. Sacramento 2017.

## Field work

**Graduate instructor:** Earth Sciences undergraduate field course. Isle of Arran, UK. 1 week, 2019 (2020 cancelled due to COVID-19). Mapping and interpretation.

**Graduate instructor:** Earth Sciences undergrad. course. Dorset, UK. 1 week, 2018, 2019, 2020 (virtual). Introduction to field skills and sedimentology.

**Stratigraphic paleobiology:** Paleontological Society graduate field course. Bitterroot Mountains, MT. 2 weeks, 2017. Sequence strat. and logging sections.

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

**Wildlife research:** Lale'enok Resource Centre, Kenya. Independent research on bird behavior (Jetz Lab). 2 months, 2015.

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

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