

Stephanie Sang

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EDUCATION

University of Chicago - Ph.D candidate in Integrative Biology (Sept. 2016 - present)

University of Bristol - MSc. in Palaeobiology (Distinction) (Sept. 2016)

Cornell University - B.A. *summa cum laude* (May 2015)

Biological Sciences (Ecology & Evolutionary Biology) and Science of Earth Systems (Paleobiology)

Cumulative GPA: 3.87

GRE: 167 Verbal, 161 Quantitative, 5.5 Analytical

RESEARCH EXPERIENCE

University of Chicago, PhD dissertation. Research advisors: Dr. Michael Coates, Dr. Robert Ho (2016 - present)

- Characterizing the spatiotemporal dynamics of lateral plate mesoderm and its contribution to the paired fins using zebrafish *Danio rerio* as a model. Threading together the fields of development and evolution by also analyzing shifts in pelvic fin position along the body axis throughout actinopterygian evolution.

University of Bristol, MSc Thesis. Research Advisor: Dr. Jill Harrison (2015-2016)

- Regulation and development of the shoot apical meristem in moss *Physcomitrella patens*.

Paleontological Research Institution, B.A. Honors Thesis. Research Advisor: Dr. Warren Allmon (2012-2015)

- Built molecular and morphological phylogenies of Neotropical turritellines.
- Investigated the evolution of larval developmental mode in turritellines after the closure of the Central American Isthmus.

Case Western Reserve University, undergraduate summer research.

- Research Advisor: Dr. Darin Croft. Photographed and began to score microwear from Tertiary S. American mammal teeth, retouched photographs of mammal skulls to be used in a digital collection, checked and expanded the database of Tertiary S. American marsupicarnivores. (2010-2012)
- Research Advisor: Dr. Peter McCall. Processed data from and assisted set-up of experiments using cesium/fluorescent tracers in order to determine the effect of organisms on sediment types with applications in pollution control. (2012)

Kent State University, undergraduate summer research. Research Advisor: Dr. Chris Blackwood.

- Performed and assisted with soil microbiology laboratory techniques such as leaf chemical analysis, DNA isolation, gel electrophoresis, and sediment particle size analysis. (2012)

The Cleveland Museum of Natural History:

- Research Advisor: Dr. Michael Ryan (Department of Vertebrate Paleontology). Reconstructed bone beds based on bone bed grids, photographed specimens, and recorded bone data. (2011)
- Research Advisor: Dr. Joe Hannibal (Department of Invertebrate Paleontology). Prepared and catalogued specimens and their data. (2009)

PUBLICATIONS

Sang, S., Friend, D. S., Allmon, W. D., Anderson, B. M. (2019). "Protoconch enlargement in Western Atlantic turritelline gastropod species following the closure of the Central American Seaway." *Ecology and Evolution*, 9(9), 5309-5323.

Whitewoods, C. D., Cammarata, J., Venza, Z. N., **Sang, S.**, Crook, A. D., Aoyama, T., ... Szvnyi, P. (2018). "CLAVATA was a genetic novelty for the morphological innovation of 3D growth in land plants." *Current Biology*, 28(15) pp. 2365-2376.

Sang, S. and W.D. Allmon (2013). "Long Before Cayuga's Waters: The Spectacular Devonian Geology and Paleontology of the Ithaca, New York Region." *M.A.P.S. Digest v. 35*.

CONFERENCE PRESENTATIONS

Sang, S., Tietjen, K., and Coates, M.I., January 2018. "Getting a grip: the unexpected tooth-like form and arrangement of tenacular denticles" *Society for Integrative and Comparative Biology Annual Meeting*. Poster.

Sang, S., Aoyama, T., and Harrison, C.J., July 2016. "CLAVATA is an ancient pathway for regulating shoot apical meristem function" *Euro Evo Devo*. Poster.

Sang, S., Bell, S.C., and W.D. Allmon, November 2015. "Towards predicting accurate morphological character sets in turritellines" *Young Systematists' Forum*. Oral session. **Awarded best presentation.**

Sang, S., and W.D. Allmon, October 2014. "Phylogenetic histories of Central American turritelline gastropods" *Geological Society of America Annual Meeting*. Oral session.

Allmon, W.D., Anderson, B.M., Friend, D.S., Onofryton, K., and **S. Sang**, February 2014. "Toward a phylogeny of Western Atlantic Neogene Turritelline Gastropods" *North American Paleontological Conference*. Oral session.

Sang, S., Onofryton, K. and W.D. Allmon, October 2013. "Phylogeny, developmental mode, and evolution in geminate species of turritelline gastropods from the Central American Isthmus region" *Geological Society of America Annual Meeting*. Poster.

Sang, S., and W.D. Allmon, August 2013. "Differential evolutionary outcomes in turritelline gastropod geminate species across the Central American Seaway" *Paleontological Research Institute Summer Symposium*. Poster.

TEACHING EXPERIENCE

University of Chicago: Teaching Assistant for BIOS 20189 lab section (Fundamentals of Developmental Biology) (January - March 2020)

Cornell University Learning Strategies Center: Course Assistant for BIOG 1009 (Prefreshman Summer Program in Biology) (June - August 2013)

Kumon Math & Reading Center of Solon and Ithaca: Teaching assistant (2009 - 2011, 2013)

FIELD EXPERIENCE

Gatun Fm, Panama: Collected turrnelline fossil protoconchs with researchers from the Smithsonian Tropical Research Institute (April 2014)

AWARDS AND GRANTS

President's Volunteer Service Award (UChicago) (2019) Recognizes two students who have demonstrated an extraordinary commitment to voluntary service in the greater community during the past academic year.

Developmental Biology Training Grant (UChicago) trainee (2017-2019)

NSF GRFP, Honorable Mention (2016, 2017)

Alumni Travel Grant (Univ. Bristol) (2016)

American Alumni Scholarship (Univ. Bristol) (2015-2016) Half of international student tuition fees. Awarded on the grounds of academic excellence, financial need, and ambassadorial potential.

College of Arts and Sciences 'Exceptional Senior' (Cornell) (2015)

Michael W. Mitchell Memorial Fund (Cornell) (2015) Awarded to outstanding juniors or seniors in the Science of Earth Systems major.

Frank H.T. Rhodes Award (Cornell) (2015) Given each year to the senior with the highest GPA in the Science of Earth Systems major.

ExxonMobil Minority Scholarship Award (GSA) (2014)

Student Travel Grant (GSA) (2014)

Office of Undergraduate Biology Travel Grant (Cornell) (2014)

Einhorn Discovery Grant (Cornell) (2014)

College of Arts and Sciences Undergraduate Research Grant (Cornell) (2014)

On To The Future (GSA) (2013) Funding for minority students to attend their first GSA annual meeting.

Dean's List (Cornell) (2011-2015) 3.5 GPA or higher.

Hunter R. Rawlings III Presidential Research Scholar (Cornell) (2013-2015) Support account for Cornell students who are heavily involved in research

SERVICE

Sewall Wright Speaker Committee (2019, 2020)

- Coordinated the Darwinian Cluster to nominate a student-invited speaker for the annual Sewall Wright lecture.

Fulbright Grant Interview Committee (2018)

- Evaluated undergraduate candidates for the Fulbright Grant with the College Center for Research and Fellowships.

Co-organizer, **Art and Science Expo** (2017-present)

- Annual event that showcases artwork from UChicago researchers

OUTREACH & LEADERSHIP EXPERIENCE

Graduate Student Advisor and Co-Founder at **UChicago Science Olympiad** (2016-present) and Co-Founder and Director, **Science Olympiad at Cornell** (2014-2015)

- Mission Statement: Increase scientific participation in middle and high schoolers in the surrounding community through the Science Olympiad program.
- Founded and led 15-member student organizations at both institutions that consist of alumni from the Science Olympiad program, a national K-12 extracurricular in which students compete in 23 different events.
- Directed and oversaw the finances and logistics of 3 different tournaments: the 1st Cornell Tournament (2015); 1st and 2nd UChicago Tournaments (2018, 2019)
- Reached 1,700 students from 40+ high schools overall
- Acquired \$15000+ in overall funding through procuring departmental sponsorships and student government funding
- Established bi-annual enrichment workshops for Chicago Public Schools students; have reached 200+ middle and high school students.

Co-Founder at **Science on the South Side Initiative** (2018-present)

- Created strategy and implementation for the Science on the South Side initiative that is currently establishing an Elementary Science Olympiad program within 5 Chicago Public Schools to increase minority participation in the sciences.
- Secured \$18,000 in funding by (1) winning the Social Venture Challenge, a business plan-style competition that awards seed funding to the most promising projects, at the 2018 Clinton Global Initiative University Conference and (2) acquiring funding from The Women's Board Grants Fund from the University of Chicago.

Co-Chair, **Science Olympiad Alumni Task Force** (2018-present)

- Appointed by the Executive Director of the Science Olympiad non-profit organization to co-chair the Alumni Task Force, a strategic initiative that seeks to leverage alumni participation across the country to improve the Science Olympiad community.
- Interviewed candidates to form a 10-person task force and designed 5 main objectives. Presented these ideas to the Science Olympiad Board of Directors and gained approval from the Executive Director to implement these initiatives. Currently managing this team.

MENTORSHIP

3 undergraduates (Spring 2020) Introduction to basic lab skills: will be running group meetings and teaching these underclassmen a variety of techniques

1 undergraduate (Winter 2020-current) Digitizing pelvic fin position in actinopterygians

1 undergraduate (Summer 2019-current) Expression of Fgfs in the developing pelvic fin