

CURRICULUM VITAE

Lauren Sallan

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EDUCATION

2012	Ph.D.	Integrative Biology	<u>University of Chicago</u>
2009	S.M.	Organismal Biology	<u>University of Chicago</u>
2007	M.S.	Biological Sciences	<u>Florida Atlantic University</u>
2003	B.S.	Biology, <i>cum laude</i> .	<u>Florida Atlantic University</u>

POSITIONS

2017-	Martin Meyerson Assistant Professor in Interdisciplinary Studies	<u>University of Pennsylvania</u>
2017/2019-	TED Fellow/Senior Fellow	<u>TED</u>
2014-	Assistant Professor Earth and Environmental Science & Evolution Cluster	<u>University of Pennsylvania</u>
2012-2014	Michigan Fellow/Assistant Professor Ecology and Evolutionary Biology	<u>Michigan Society of Fellows / University of Michigan</u>

PEER-REVIEWED PUBLICATIONS

Lab members/Penn Trainees: #Undergrad. Student, ^Grad. Student, +Postdoc

2018 **Sallan, L.**, Friedman, M., Sansom, R. S., **Bird, C.#**, and I. J. Sansom. "The Nearshore Cradle of Early Vertebrate Diversification." *Science* **362**: 460-464.*

**Perspective by Catalina Pimiento (362: 402-403), Highlighted in 'This Week in Science'. Named one of the top 4 paleontological discoveries of 2018 by Forbes, Featured in the New York Times Trilobites column (Nov. 1) and print Science section (Nov. 5), BBC World Service 'Science in Action' (Oct. 25), CBC Radio (Oct. 25), Daily Mail (Oct. 25), New Scientist (Oct. 25), and The Conversation (Oct. 26).*

2018 **Stack, J.#** and **L. Sallan**. "An Examination of the Devonian Fishes of Michigan." *PeerJ* **6**:e5636

2018 Rabosky, D., Chang, J., Title, P., Cowman, P., **Sallan, L.**, Friedman, M., Kashner, K., Garilao, C., Near, T., Coll, M., and M. Alfaro. "An Inverse Latitudinal Gradient in Speciation Rate for Marine Fishes." *Nature* **559**: 392-395.

2017 **Sallan, L.**, Giles, S., Sansom, R., **Clarke, J.+**, Johanson, Z., Sansom, I., and P. Janvier. "The 'Tully Monster' is not a vertebrate: convergence,

- characters and taphonomy in Paleozoic problematic animals.”
Palaeontology **60**: 149-157.*
- **Top Story* on CBS News (Feb. 22), Daily Mail (Feb. 20), *Featured on Science Friday* (Mar. 10), *Live Science* “Science Images of the Week” (Feb. 24), *USA Today* “Discoveries of the Week” (Feb. 25);
Palaeontology Top 20 Most Downloaded Paper 2017.
- 2017 Majtanova, Z., Symonova, R., Rodriguez, L. A., **Sallan, L.** and P. Rab. “The ‘Holostei versus Halecostomi’ problem: insight from cytogenetics of ancient non-teleost actinopterygian fish, the bowfin *Amia calva*.”
Journal of Experimental Zoology B **328**: 620-628.
- 2016 **Sallan, L.** “Fish ‘tails’ result from outgrowth and reduction of two separate ancestral tails.” *Current Biology* **26**: R1224-R1225*
 **Top Story* on Seeker (Dec. 5), *The Scientist Daily News Roundup*, and *DailyMail Sci/Tech* (Dec. 6)
- 2015 **Sallan, L.** and **A. K. Galimberti**#. “Body-Size Reduction in Vertebrates Following the End-Devonian Mass Extinction.” *Science* **350**: 812-815.*
 **Perspective by Peter Wagner* (350: 736-737), *Featured story* on Science Podcast: 13 Nov. Show, *Featured in Carl Zimmer’s Matter column*, *New York Times* (Nov. 13), *Top Story* on ScienceNow (Nov. 12), *Wired UK’s 10 must-read articles for 16 November 2015*, *Featured on Penn main website* (Nov. 13-17).
- 2014 **Sallan, L.** “Major Issues in the Origins of Ray-finned Fish (Actinopterygian) Biodiversity.” *Biological Reviews* **89**: 950-971.
- 2014 **Sallan, L.** and M. Coates. “The Long-Rostrumed Elasmobranch *Bandringa Zangerl*, 1969 and Taphonomy within a Carboniferous Shark Nursery.” *Journal of Vertebrate Paleontology* **34**: 22-33.*
 **Top Story* on Science Magazine News (Jan. 7), *LiveScience* “Most interesting science news article of the week.” (Jan. 12), *featured in New Scientist* (#1952, Jan. 15)
- 2013 **Sallan, L.** and M. Coates. “Styracopterid (Actinopterygii) Ontogeny and the Multiple Origins of Post-Hangenberg Deep-bodied Fishes.” *Zoological Journal of the Linnean Society* **169**: 156-199.
- 2012 **Sallan, L.** “Tetrapod-like Axial Regionalization in an Early Ray-finned Fish.” *Proceedings of the Royal Society B* **279**: 3264-3271.
- 2012 Friedman, M. and **L. Sallan**. “Five Hundred Million Years of Extinction and Recovery: a Phanerozoic Survey of Large-Scale Diversity Patterns in Fishes.” *Palaeontology* **55**: 707-742*
 Selected as one of ten classic papers on biodiversity. Benton, M. 2013 “Origins of Biodiversity.” Palaeontology* **56: 1-7.
- 2012 **Sallan, L.** and M. Friedman. “Heads or Tails: Staged Diversification in Vertebrate Evolutionary Radiations.” *Proceedings of the Royal Society B* **279**: 2025-2032.
- 2011 **Sallan, L.**, Kammer, T., Ausich, W. and L. Cook. “Persistent Predator-Prey Dynamics Revealed by Mass Extinction.” *Proceedings of the National Academy of Sciences* **108**: 8335-8338.*

- 2010 **Sallan, L.** and Coates, M. “End-Devonian Extinction and a Bottleneck in the Early Evolution of Modern Jawed Vertebrates.” *Proceedings of the National Academy of Sciences* **107**: 10131-10135. *
**Fifty Ideas That Will Change Science Forever. New Scientist #2781 October 9, 2010. Featured by Tribune Newspapers (LA Times, May 17), NSF (May 18), The Independent (UK) and others.*

AWARDS AND HONORS

- 2018 Distinguished Service Award for Early Achievement
 University of Chicago, Biological Sciences Division Alumni Award
- 2018 Faculty Mentoring Undergraduate Research Award
 CURE, Provost’s Office, University of Pennsylvania
- 2017- Martin Meyerson Assistant Professor in Interdisciplinary Studies
 (Endowed Chair)
- 2017 TED Fellow (1 of 15 worldwide)
- 2017 Penn 60-Second-Slam Audience Choice
- 2015 Stensio Award for top early career paleoichthyologist,
 13th International Symposium on Early Vertebrates/Lower Vertebrates
- 2015 Taylor & Francis Award for best article in the
Journal of Vertebrate Paleontology, 2nd Place.
 Society of Vertebrate Paleontology
- 2015 Proceedings B Top Reviewer for 2014
 Royal Society Publishing
- 2010 President’s Prize, Honourable Mention for best presentation.
 Palaeontological Association.
 Annual Meeting, Ghent, Belgium. December 17-20, 2010.
- 2009 Sylvester-Bradley Award
 Palaeontological Association
- 2009 Raney Award
 American Society of Ichthyologists and Herpetologists
- 2009 Student Presentation Award
 Geological Society of America, North-Central Section.
 43rd Annual Meeting. Rockford, IL. April 2-3, 2009

GRANTS

Research Grants and Fellowships

Awarded

- 2018 CURF Grant for Faculty Mentoring Undergraduate Research
- 2017 NSF GRF (to PhD Student Erynn Johnson)
- 2015 NSF GRF (to MS Student Bryan Juarez)
- 2013 Matthew Research Grant,
 New Brunswick Museum
- 2013 NERC: Tetrapod World: evolution, environment and diversity.
 (Project Partner)
- 2012 Michigan Fellowship

- 2012 Michigan Society of Fellows, University of Michigan
Omidyar Fellowship (Declined)
Santa Fe Institute
- 2010 NSF DDIG
“DISSERTATION RESEARCH: The Consequences of Global Events on Vertebrate Biodiversity: the Paleozoic Actinopterygian Radiation.”
National Science Foundation
- 2009 N. Gary Lane Student Research Award
Paleontological Society
- 2009 Earth Science Student Research Grant
Evolving Earth Foundation
- Pending**
CAREER: “Determining Distinct Triggers of Mass Extinction and Diversification in Fishes” (**PI Sallan**)
- SERVICE**
- 2017-2018 Organizer, Geoscience Colloquium Series, University of Pennsylvania
- 2016- Associate Editor, *Journal of Vertebrate Paleontology*
- 2015- Member, SAS Planning Group on Quantitative Explorations of Evolving Systems, University of Pennsylvania.
- 2014- Member, Education and Outreach Committee, Paleontological Society.
- 2013-2017 Member, Program Committee, Society for Vertebrate Paleontology
- 2013 Co-Chair, Organizing Committee, 2013 Early Career Scientists Symposium “Macroevolution: Fossils, Frameworks and Phylogenies.”
University of Michigan
- 2013-2014 Reviewer, Proquest Distinguished Dissertation Award
- 2013 Reviewer, Tickle Award, UM Museum of Zoology
- 2011-2012 Organizer, “Fish Group” biweekly interdepartmental/interdisciplinary seminar series, University of Chicago

Contributing Member: Paleobiology Database (PBDB).

Manuscript Reviews: Nature, Science, Proceedings of the National Academy of Science (Guest Editor), Nature Communications, Science Advances, Current Biology, Proceedings of the Royal Society B, Nature Ecology and Evolution, Geology, Biological Reviews, BMC Evolutionary Biology, Biology Letters, Paleobiology, Palaeontology, Journal of Vertebrate Paleontology, American Naturalist, Systematic Biology, Evolution, Oecologica, eLife, PeerJ, Scientific Reports, PLoSOne, Journal of the Geological Society, Bulletin of Geosciences, Scottish Journal of Geology, Transactions of the Royal Society of Edinburgh – Earth Sciences, Palaeontologica Electronica, University of Michigan Museum of Zoology publications, New Mexico Museum of Natural History and Science Bulletin, Proceedings of the Academy of Natural Science – Philadelphia.

Grant Reviews: NSF Division of Environmental Biology, NSF Earth Surface Processes, NSF Developmental Systems Cluster, NSERC

NSF Panels: NSF GEO Division of Environmental Biology (Systematics and Biodiversity Science), NSF GEO Earth Surface Processes (Sedimentary Geology and Paleobiology)

MENTORSHIP

Graduate Students

Primary Advisor

2018- Ananth Srinivas (PhD Student, EES, Penn)
2016- John Sime (PhD Student, EES, Penn)
2015-2018 Erynn Johnson (PhD Student, EES, Penn)
2014-2018 Aja Carter (PhD Student, EES, Penn; co-advisor)
2016-2017 Travis Lumpkin (Masters of Applied Geosciences, EES, Penn, Now: Teacher, Manassas Park City Schools)
2014-2015 Bryan Juarez (Frontiers Master's Student, EEB, UM, Now: PhD student, Iowa State University)

Non-Thesis Research Supervisor

2015 Elizabeth Anzinger (Masters of Applied Geosciences, EES, Penn)
2015 Britney Vazquez (Masters of Applied Geosciences, EES, Penn)
2015 Wei Tang (Masters of Architecture, Design, Penn)

Committee Member

2018- Michaela Mitchell (PhD Student, Wright State University)
2014- Stephen Jasinski (PhD Student, EES, Penn)
2014-2016 Liguo Li (MS Student, EES, Penn)

Undergraduate Researchers

Senior Thesis Advisor

2013- Jack Stack (Benjamin Franklin Scholar, Penn Class of 2019)*
2017-2018 Jisoo Kim (Senior Thesis, Earth Science Major, Penn Class of 2018; Now: MS Student, Arizona State University)*
2017 Courtney Lang (Senior Thesis, Env. Sci. Major, Penn Class of 2017; Now: MS Student, Columbia University)
2014-2015 Andrew Galimberti (External Senior Thesis, Kalamazoo College Class of 2015; Now: Entomologist, Cornell Cooperative Extension)

Non-Thesis Research Supervisor

2018- Sophie Spalding (Penn Class of 2020)
2018- Francesca Marini (Penn Class of 2021)
2018- Nyazia Bey (Hayden Scholar, Penn Class of 2020)
2018- Alex Pearlstein (Penn Class of 2021)
2018- Jeffrey Manner (Penn Class of 2020)
2017- Jeremy Wyman (Penn Class of 2021)
2017- Regina Fairbanks (Penn Class of 2021)
2017-2018 Briana DiMarco (Drexel University)

2017 Victoria Zhang (Penn Class of 2020)
 2017 Alana Rosen (University of Delaware)
 2017 Elizabeth Coulter (Penn Class of 2018)
 2017 Charles Sansone (PURM student, Penn Class of 2019)
 2017 Abigail Waugh (PURM student, Penn Class of 2020)
 2017 Sabine Nix (University Scholar, Penn Class of 2020)
 2017 Saloni Wadhwa (Penn Class of 2020)
 2016 Charlotte Bird (Univ. Birmingham, Supported by Pal. Ass.)
 2016-17 Connor Leach (Penn Class of 2019)
 2016-17 Gautam Nagaraj (Penn Class of 2017)
 2016 Tyler Ling (Penn Class of 2018)
 2016 Jonathan Hoh (Penn Class of 2016)
 2016 Patrick Romano (Penn Class of 2016)
 2015-2016 Catherine Breiner (Penn Class of 2016)
 2015-2016 Zara Turner (Penn Class of 2017)
 2015 Matthew Scott (Penn Class of 2018)
 2015 Nina Vithayanthil (Penn Class of 2016)
 2015 Althea Escorce (Penn Class of 2016)
 2015 Julia Slater (Penn Class of 2017)
 2013-2014 Tyler Carlton (Michigan Class of 2015)
 2013 Michelle Park (Michigan Class of 2016)
 2013 Greg Hanafin (Michigan Class of 2014)
 2012-2013 Scott Johnston (Michigan Class of 2016)

Postdoctoral Scholars

2015-2017 John Clarke, PhD
 2014 Brian Swartz, PhD

TEACHING

2018	GEOL 516 <i>Paleoecology</i>	University of Pennsylvania
2017-	GEOL 479 <i>Macroevolution</i>	University of Pennsylvania
2017-	GEOL 750 <i>Geoscience Colloquium Seminar</i>	University of Pennsylvania
2015-	GEOL 205/405 <i>Paleontology</i>	University of Pennsylvania
2015-2016	GEOL 125 <i>Earth and Life Through Time</i>	University of Pennsylvania
2013	<i>Biology of Fishes</i>	University of Michigan

WORKSHOPS

2011 Macroevolutionary Methods in R
 Santa Barbara, CA, August 1-4, 2011

INVITED TALKS

- 2019 Smithsonian Institution Deep Time Symposium (Public). March 29, 2019.
- 2019 PaleoFest 2018, Burpee Museum of Natural History, March 2-3, 2018.
- 2019 Yale University, Geology and Geophysics, February 13, 2019.
- 2019 University of California, Berkeley, Integrative Biology, February 1, 2019.
- 2018 Society of Vertebrate Paleontology: “Big Data, Big Problems.” Albuquerque, NM. October 17, 2018
- 2018 Harvard University, Paleobiology Seminar, April 3, 2018.
- 2017 Yale University, Ecology and Evolutionary Biology, November 8, 2017.
- 2017 University of Chicago, Keynote, Darwinian Cluster Annual Retreat, September 22, 2017.
- 2017 Symposium on Vertebrate Paleontology and Comparative Anatomy. “Special Symposium: Macroevolution in Paleontology”, Birmingham, UK. September 12, 2017.
- 2017 University of Michigan Museum of Paleontology, Ann Arbor, MI May 19, 2017.
- 2017 Penn 60-Second Slam, Alumni Weekend, May 13, 2017.
- 2017 Academy of Natural Sciences/Drexel University, May 12, 2017.
- 2017 TED2017, Vancouver, Canada. April 24, 2017.
- 2017 Penn 60-Second Lecture, Collegepalooza, April 12, 2017.
- 2017 Penn Science Café, February 21, 2017.
- 2016 Temple University, Geology Department. December 2, 2016.
- 2016 Delaware Valley Geological Society, Academy of Natural Science. April 29, 2016.
- 2016 American Museum of Natural History, February 29, 2016.
- 2015 Philadelphia Geological Society, Bryn Mawr College. October 22, 2015
- 2015 Royal Swedish Academy of Sciences 275th Anniversary Symposium: “Palaeontological and Molecular Approaches to Early Vertebrate Evolution.” Uppsala, Sweden. May 12-13, 2015.
- 2014 University of Pennsylvania. Biology Department. Philadelphia, PA October 30, 2014.
- 2014 Michigan Society of Fellows, University of Michigan. Ann Arbor, MI. April 8, 2014.
- 2014 University of California, Los Angeles, Earth, Planetary and Space Sciences, February 27, 2014.
- 2014 University of Michigan Museum of Paleontology, Ann Arbor, MI. February 21, 2014.
- 2014 University of Pennsylvania, Evolution Cluster, Philadelphia, PA. February 10, 2014.
- 2013 Geological Society of America Annual Meeting, T239. Recent advances in the nature of the Mesozoic Marine Revolution. Denver, CO. October 27-30, 2013.
- 2013 Eastern Michigan University, October 9, 2013
- 2013 Michigan Society of Fellows, University of Michigan, April 8, 2013.
- 2013 Virginia Tech, Geosciences, Blacksburg, VA February 22, 2013

- 2012 University of Michigan, Ecology and Evolutionary Biology, Ann Arbor, MI. September 20, 2012
- 2012 Early Career Scientists Symposium 2012, University of Michigan, Ann Arbor, MI. March 25, 2012.
- 2012 University of Chicago, Natural History Seminar Series, Department of Ecology and Evolution, University of Chicago, Chicago, IL. January 31, 2012.
- 2012 Santa Fe Institute, Santa Fe, NM. January 25, 2012.
- 2011 World Conference on Marine Biodiversity. Aberdeen, Scotland. September 26-30, 2011.
- 2011 Geological Society of America Northeast/North-Central Combined Section Meeting, Pittsburgh, PA. March 20-22, 2011.

REGULAR CONFERENCE PRESENTATIONS

Lab members/Penn Trainees: #Undergraduate Student, ^Graduate Student, +Postdoc

- 2018 **Sime, J.^**, Friedman, M. and **L. Sallan**. "New ray-finned fish (Actinopterygii) taxa from the Late Devonian of Eastern North America expose unexpected diversity of early freshwater forms." Society of Vertebrate Paleontology Annual Meeting. October 21.
- 2018 **Stack, J.#**, Hodnett, J.-P., Lucas, S., and **L. Sallan**. "*Tanyrhinichthys*, a long-rostrumed Carboniferous ray-finned fish (Actinopterygii), and the evolution of elongate snouts in fishes." Society of Vertebrate Paleontology Annual Meeting. October 21.
- 2018 Guillerme, T., Healy, K., Castiello, M., Dearden, R., Delcourt, R., Jerves, A., Brazeau, M., Weisbecker, V., and **L. Sallan**. "Timespines; does predator-prey arms race interaction drive morphological adaptation through time?" Crossing the Palaeontological-Ecological Gap 2018. Leeds, UK. August 30.
- 2018 **Carter, A. M.^**, Hsieh, S. T., Dodson, P., and **L. Sallan**. "Ecomorphology in Temnospondyli (Amphibia) Vertebrae: A Geometric Morphometrics Study." Society for Integrative and Comparative Biology Annual Meeting. San Francisco, CA. January 3-7.
- 2017 Pardo, J. D., **Carter, A. M.^**, **Sallan, L.**, and Anderson, J. S. "A Bizarre Early Tetrapod From the Early Permian of Kansas, USA, Provides Further Support for Radical Polyphyly of 'Lepospondyls.'" Palaentological Association Annual Meeting. London, UK.
- 2017 **Sime, J.^**, Chang, J., Alfaro, M. and **L. Sallan**. "Does the Ecology of Clade Imbalance Explain the "Living Fossil" Phenomenon Within a Megaphylogeny of Ray-finned Fishes (Actinopterygii)?" Geological Society of America 79th Annual Meeting. Seattle, WA, October 22-25.
- 2017 **Stack, J.#** and **L. Sallan**. "Sampling, Stasis and Snow: Resolving Gaps in the Late Paleozoic Fish Record." Geological Society of America 79th Annual Meeting. Seattle, WA, October 22-25.

- 2017 **Johnson, E.**,[^] Allmon, W., Sipzner, D., and **L. Sallan**. “Shells and marine revolutions: experimental tests with shell shapes.” Geological Society of America 79th Annual Meeting. Seattle, WA, October 22-25.
- 2017 **Sallan, L., Lumpkin, T.**,[^] **Jasinski, S.**,[^] and **A. Rosen**.# “The emergence of modern marine fish faunas after the Jurassic-Cretaceous Crisis.” 10th Indo-Pacific Fishes Conference, Tahiti, October 3-7.
- 2017 **Johnson, E. H.**,[^] and **L. Sallan**. “Shells and Marine Revolutions.” Paleontological Research Institution Summer Symposium. Ithaca, NY. July 29-30.
- 2017 **Sallan, L.,** Friedman, M., Sansom, R. and I. Sansom. “Paleozoic jawless fishes exhibited body form-dependent modes of habitat use and dispersal.” 14th International Symposium on Early and Lower Vertebrates, Holy Cross Mountains, Poland, July 3-8.
- 2017 **Sallan, L.,** Friedman, M., Sansom, R. and I. Sansom. “The nearshore cradle and museum of early vertebrate diversification.” Evolution 2017, Portland, OR, June 23-27.
- 2017 **Johnson, E. H.**,[^] and **L. Sallan**. “Theoretical Shell Models: Mathematical and Biological Trade-Offs.” Evolution 2017, Portland, OR, June 23-27.
- 2017 **Sime, J.**,[^] Chang, J., Alfaro, M. and **L. Sallan**. “Pervasive diversity imbalance among sister-clades of ray-finned fishes.” Evolution 2017, Portland, OR, June 23-27.
- 2017 **Carter, A.**,[^] **Sallan, L.,** Dodson, P., and T. Hsieh. “Ecological implications of presacral morphology in Temnospondyli.” Evolution 2017, Portland, OR, June 23-27.
- 2017 Chang, J., Roy, K., Baum, J., Cowman, P., Friedman, M., **Sallan, L.,** **Clarke, J.**,⁺ and M. Alfaro. “Size-selective harvesting and the macroevolutionary implications of an ‘anthropogenic filter’ in ray-finned fishes.” Society for Integrative and Comparative Zoology, New Orleans, LA, January 3-7.
- 2017 **Carter, A.**,[^] **Sallan, L.,** Hsieh, T., and P. Dodson. “Just how different? Quantifying vertebral diversity in temnospondyls.” Society for Integrative and Comparative Zoology, New Orleans, LA, January 3-7.
- 2016 **Carter, A.**,[^] **Sallan, L.,** Hsieh, T., and P. Dodson. “Just how different? Quantifying vertebral diversity in temnospondyls.” Society of Vertebrate Paleontology 76th Annual Meeting. Salt Lake City, UT, October 29.
- 2016 **Stack, J.**,[#] **Sallan, L.,** Hodnett, J. P., and S. Lucas. “Reanalysis of the ecomorphology of *Tanyrhinichthys mcallisteri*, a long-rostrumed actinopterygian fish, based on novel specimens from Kinney Brick Quarry, New Mexico.” Geological Society of America 78th Annual Meeting. Denver, CO, September 26.

- 2016 Chang, J., Roy, K., Baum, J., Cowman, P., Friedman, M., **Sallan, L., Clarke, J.+** and M. Alfaro. "Eating away the fish tree of life: the phylogenetic distribution of human exploitation." Evolution, Austin TX, June 17-21.
- 2016 Alfaro, M., Chang, J., Cowman, P., Friedman, M., **Sallan, L., Clarke, J.+**, Rabosky, D. and T. Near. "An evolutionary timescale for the diversification of ray-finned fishes." Evolution, Austin, TX, June 17-21.
- 2016 **Stack, J.#** and **L. Sallan**. "The forgotten sea: an examination of the vertebrates of the Michigan Basin." Geobiology Symposium XXIV, Philadelphia, PA, February 26.
- 2016 **Clarke, J.+**, **Sallan, L.**, and M. Friedman. "The 100-million-year journey to teleost supremacy." Geobiology Symposium XXIV, Philadelphia, PA, February 26.
- 2016 **Sallan, L.** "The Silurian nekton revolution." Geobiology Symposium XXIV, Philadelphia, PA, February 26.
- 2016 **Carter, A.^**, **Sallan, L.**, Tsieh, T. and P. Dodson. "Just how different? Quantifying vertebral diversity in primitive tetrapods." Society for Integrative and Comparative Biology Annual Meeting, Portland, OR, January 3-7.
- 2015 **Clarke, J.+**, **Sallan, L.**, and M. Friedman. "The 100-million-year journey to teleost supremacy." Palaeontological Association Annual Meeting, Cardiff, Wales, December 14.
- 2015 **Sallan, L.** Friedman, M., Sansom, R. and I. Sansom. "The Silurian Nekton Revolution: Paleozoic jawless fishes exhibited modern form-dependent modes of habitat use." Geological Society of America 77th Annual Meeting. Baltimore, Maryland, November 1-4.
- 2015 **Clarke, J.+**, Friedman, M. and **L. Sallan**. "Ships firing in the night? The Mesozoic rise of teleosts accompanied by diversity loss and trait shifts in holostean fishes." Geological Society of America 77th Annual Meeting. Baltimore, Maryland, November 1-4.
- 2015 **Stack, J.#** and **L. Sallan**. "An examination of the Devonian fishes of the Michigan Basin." Geological Society of America 77th Annual Meeting. Baltimore, Maryland, November 1-4.
- 2015 Majtánová, Z., Symonová, R., Rodrigues, L. A., **Sallan, L.**, Cavin, L., Havelka, M., Flajšhans, M., Ráb, P. "Cytogenetics of non-teleostean ray-finned fishes (Actinopterygii) and the Halecostomi-Holostei problem." XVI Simpósio de citogenética e Genética de Peixes, Cuiabá, Mato Grosso, Brazil. October 25-28.
- 2015 **Sallan, L.** "Ontogeny in early ray-finned fishes (Actinopterygii) and the origins of modern ray-fin traits." 13th International Symposium on Early Vertebrates/Lower Vertebrates. Royal Society of Victoria. Melbourne, Australia. August 3-7.
- 2015 **Sallan, L., Carlton, T.#**, and **B. Vazquez^**. "The rise of fishes after the fall of the Ordovician World." 13th International

- Symposium on Early Vertebrates/Lower Vertebrates.
Royal Society of Victoria. Melbourne, Australia. August 3-7.
- 2015 **Juarez, B.+ and L. Sallan.** “Ecomorphological evolution of lobe-finned fishes through the Paleozoic.” Emerging Researchers National Conference on STEM, Washington DC. February 19-21.
- 2015 Majtanová, Z., Symonová, R., Ariaz-Rodrigues, L., **Sallan, L.**, Ráb, P. Bowfin searches for identity: non-teleost fish with the teleost genome. Zoological Days Brno 2015. Brno, Czech Republic, February 12-13, 2015.
- 2014 **Sallan, L. and A. Galimberti#.** “Ecologically-driven "Cope's rule" size increases in Devonian fishes reversed by end-Devonian mass extinction.” Society of Vertebrate Paleontology, 74th Annual Meeting, Berlin, Germany. November 5-8.
- 2014 **Sallan, L. and T. Carlton#.** “The rise of fishes after the fall of the Ordovician World.” T131: Critical Earth-Life Transitions: The Marine Perspective. Geological Society of America 76th Annual Meeting. Vancouver, Canada. October 19-22.
- 2014 **Juarez, B.^ and L. Sallan** “The ecological evolution of lobe-finned fishes during the Paleozoic” T214: Unearthing the History of Life: The Application of Phylogenetic Methods to the Fossil Record. Geological Society of America 76th Annual Meeting. Vancouver, Canada. October 19-22.
- 2014 **L. Sallan.** “Size, shell-crushing and survival: restructuring of vertebrate ecosystems after the end-Devonian Hangenberg extinction (359 mya). Symposium 15: Comparative Palaeoecology of Phanerozoic Extinction Events, 4th International Palaeontological Congress, Mendoza, Argentina. September 28-October 3.
- 2014 **Juarez, B.^ and L. Sallan.** “Differential ecomorphological diversification in Paleozoic lobe-finned fishes (Sarcopterygii). Evolution 2014, Raleigh, NC. June 20-24.
- 2014 **Sallan, L. and A. Galimberti#.** “Ecological-driven persistent increases in early vertebrate body sizes reversed by mass extinction.” Symposium: From Macroecology to Macroevolution: the Ecological Context of Extinction and Origination. North American Paleontological Convention. Gainesville, FL. February 15-18.
- 2013 **Sallan, L.** “Fish ecology and the course of marine revolutions.” Society of Vertebrate Paleontology, 73rd Annual Meeting, Los Angeles, CA. October 30-November 2. (**session chair**)
- 2013 Sansom, I., **Sallan, L.**, Friedman, M. and R. Sansom. Habitat diversification in early vertebrates – a critical test of marine macroevolutionary patterns.” Society of Vertebrate Paleontology, 73rd Annual Meeting, Los Angeles, CA. October 30-November 2.
- 2013 **Sallan, L.** “The end-Devonian Hangenberg event: causes and consequences of a major bottleneck in vertebrate evolution.” Geological Society of America Annual Meeting, Denver, CO. October 27-30.

- 2013 **Sallan, L.** “The end-Devonian Hangenberg event: causes and consequences of a major bottleneck in vertebrate evolution.” Volcanism, Impacts and Mass Extinctions: Causes and Effects International Conference, Natural History Museum, London, March 27-29.
- 2011 **Sallan, L.** “When is an eel not an eel? Axial regionalization and specialization in an early actinopterygian fish, *Tarrasius problematicus*.” Society of Vertebrate Paleontology, 71st Annual Meeting, Las Vegas, NV, November 2-5.
- 2011 Ausich, W., Kammer, T. and **L. Sallan.** “Climate change versus predation: drivers for macroevolutionary transitions within Paleozoic crinoids.” Geological Society of America Annual Meeting. Minneapolis, MN. October 2-6.
- 2011 **Sallan, L.,** Kammer, T., Ausich, W. and L. Cook. “The impact of successive Devonian extinctions on early vertebrate ecosystems and diversity.” 12th International Symposium on Early Vertebrates/Lower Vertebrates, Dallas, TX. June 11-14. (**session chair**)
- 2010 **Sallan, L.,** Kammer, T., Ausich, W. and L. Cook. “Look, no arms race: predator-prey interactions between durophagous fishes and camerate crinoids following the Hangenberg mass extinction.” Palaeontological Association Annual Meeting, Ghent, Belgium. December 17-20.*
- *Honourable Mention, Presidents Prize for Best Presentation, Palaeontological Association.
- 2010 Kammer, T., **Sallan, L.,** Ausich, W. and L. Cook. “Radiation and legacy adaptations of Mississippian camerate crinoids following the Hangenberg extinction of predatory fishes.” Geological Society of America Annual Meeting, Denver, CO. October 31-November 3, 2010.
- 2010 **Sallan, L.** “Functional morphology and modular lags in the early diversification of ray-finned fishes (Actinopterygii).” Society for Vertebrate Paleontology 70th Anniversary Meeting. Pittsburgh, PA. October 10-13.
- 2010 **Sallan, L.** “Functional morphology and modular lags in radiation events: patterns from early actinopterygian morphospace.” 3rd International Palaeontological Congress. London, UK. June 28-July 3.
- 2010 Friedman, M. and **L. Sallan.** “Heads and tails, size and shape: contrasting patterns and modes of phenotypic diversification during the evolutionary radiation of acanthomorph teleosts.” 3rd International Palaeontological Congress. London, UK. June 28-July 3.
- 2009 **Sallan, L.** “Vertebrate biodiversity and large-scale turnover during the Devonian-Mississippian transition.” Society for Vertebrate Paleontology 69th Annual Meeting. University of Bristol, Bristol, UK. September 23-26.

- 2009 **Sallan, L.** “The impact of the Late Devonian biotic crisis on global vertebrate diversity: results from a new Paleozoic database.” 9th North American Paleontological Convention. Cincinnati, OH. June 21-26.
- 2009 **Sallan, L.** and M. Coates. “*Bandringa*: the “spoonbill dogfish” from Mazon Creek, IL” Geological Society of America, North-Central Section. 43rd Annual Meeting. Rockford, IL. April 2-3.*
*Best Student Presentation, GSA North-Central Section.

PUBLIC OUTREACH AND PRESS COVERAGE

Video: TED Talks, Discovery Channel Canada “Daily Planet”, Penn News Office, Science Friday (Radio), MinuteEarth (YouTube), ScienceLine, Penn SAS 60-Second-Slam, SFGate, *OK Go* on Facebook Live.

Radio/Podcast: *Science Magazine* Podcast, *Scientific American* Podcast, BBC 5 “5 Drive Live” (UK), FutureShock, Irish NewsRadio (Ireland), BBC World Service "Science in Action," BBC Radio Wales “Good Evening Wales” (UK), AM 900 “Matt Holmes Show” (Canada), CBC Radio (Canada), CBC “Quirks and Quarks” (Canada), German Public Radio (Deutschlandfunk, 3), Voice of America Radio “Our World” (International), Palaeocast (International), AM 1050 “Happenings Q&A” (Kenosha, WI), Anthropological Airwaves Podcast (American Anthropologist).

Print Interviews: New York Times (Top Science Story, Front Page Online, 2), Los Angeles Times (2), Christian Science Monitor, Chicago Tribune, *Forbes*, Philadelphia Inquirer, *The Ends of the World* (Peter Brannen, Harper Collins), *ScienceNow* (2), Discovery News (6), *Scientific American* (3), *New Scientist* (2), *Quartz Magazine/The Atlantic* (2), *The Conversation*, *Cosmos Magazine*, *La Repubblica* (Italy), *El Mundo* (Spain), DPA (Germany), *BioNieuws Magazine* (Netherlands), *Live Science* (2), *Science News* (2), *Hakai Magazine*, *BBC Focus Magazine* (UK), *International Business Times* (UK), *Haaretz* (Israel), *Gizmodo* (2), *ScienceLine*, *Deposits Magazine* (Cover Story), *Buceo XXI* (Spain), *Elements Science Magazine* (UK), *Correio Brasiliense* (Brazil), *IG* (Brazil), *Science Donga* (Korea), *Michigan Morning Sun*, *Times of India* (India), *Illinois Issues Magazine*, *Daily Pennsylvanian* (2), *Pennsylvania Gazette*, *Penn Parents Magazine*, *Penn Current* (2), *OMNIA Magazine* (2), *University of Chicago Magazine*, *Medicine on the Midway*.

Other Print Coverage: English: *Washington Post*, *Tribune Corp. Newspapers* (LA Times, Chicago Tribune, etc.), *Christian Science Monitor* (*2 Top Science Stories, Front Page Online), *DailyMail* (*5 Front Pages), *USA Today* (*Discoveries of the week), *TED Blog*, *Pittsburgh Post-Gazette*, *Billings Gazette*, *Alaska Dispatch*, *Albany Daily Star*, *The Columbian*, *New Scientist* (*2 Top Stories), *Scientific American* (3, *Image Gallery Feature), *Science Magazine News* (*2 Top Stories), *CBS News* (* 2 Front Pages), *MSNBC*, *Yahoo News* (*2 Top Stories), *Fox News* (*Top Science Story), *NewsDay*, *Motherboard* (Vice, *Top Story), *Discovery News/Seeker* (*3 Top Stories), *DailyMotion/MSN*, *Ars Technica* (*Top Story), *UPI* (3), *NPR* (WBEZ Chicago), *WGN News*, *Chicago Tonight* (PBS), *Quest Magazine*, *COSMOS Magazine*, *BoingBoing* (*Front Page), *Live Science* (*Story of the week, Science images of the week), *ScienceDaily* (*6 Top Stories), *ScienceNews* (2, *Top Story), *INC*, *CoolHunting*, *Breitbart*, *Independent* (UK), *Telegraph* (UK), *The Sun* (UK), *Sky News* (Australia),

ABC News (Australia), Globe and Mail (Canada), Toronto Star (Canada), Management Team (Netherlands), The Hindu (India, 3), Asian News International (India, *Multiple Times), The India Republic (India), Irish Examiner (Ireland), International Business Times, International Science Times, The Examiner (Global), RedOrbit (*Top Story and Video), DailyKos, Futurity.Org (*3 Top Stories), Mother Nature Network (2), GeologyIn, Chicagoist, Geekosystem, TI-SI (*Top Story), ZMEScience (*2 Top Stories), BioQuickNews (*Top Story), Sci-News (*Top Story), Penn Currents (*Front Page), University of Chicago Imprint, University of Chicago Biological Sciences Division Dean's Letter, University of Michigan Gateway.

International: Der Spiegel (Germany, *3 Front Pages), Spektrum (Germany, 2), DPA (German Press Agency, Interview), Deutschlandfunk (German Public Radio, Interview), Die Presse (Germany), Die Welt (Germany), AFP (France), Futura-Science (France), SciencePost (France), Sciences et Avenir (France, Top Story), Mashable avec France 24, Der Standard (Austria, 3), DeVolkskrant (Netherlands, Front Page), Videnskab (Netherlands), Europa Press Newswire (Spain, 4), Agenzia Giornalistica Italia (Italy), Haaretz (Israel), Focus Magazine (Italy, *Top Story), La Repubblica (Italy), Sky Italy, Gaia News (Italy), Great Danish (Denmark), Correio Brasiliense (Brazil), Discovery News Brazil (*Most Visited Story, Brazil), El Mundo (Spain, 2, Interview), Diario Opinion (Spain), Ojo Cientifico (Argentina), NeoFronteras (Spain, 2), Delo (Slovenia), EER Estonian Public News (Estonia), Times of India (India), Mumbai Mirror (India), Tempo (Indonesia), SAJ News Agency (Iran), Fars News (Iran), Tehran Times (Iran), Polish Press Agency (Poland), Tekiikan Maailma (Finland), AGI (Italy), Sina News (China, *Front Page), Hirado (Hungary), Donga (Korea), OZEL (Czech Republic), InfoX (Russia), Mail (Russia), Gazeta (Russia), RIA (Russian Newswire), Tyden (Czech Republic), Vector News (Ukraine), UUA (Chinese Newswire, *2), Ynet (China), Yibada (China), ScienceNet (China), Bioon News (China), Tunisian News Agency (Tunisia), China Network Television (China), Than Nien (Vietnam), DBV (Vietnam).