Dr. Amanda Godbold

Post-Doctoral Fellow

Smithsonian Tropical Research institute

Contact

agodbo@gmail.com

Website

www.algodbold.com

Education

- **University of Southern California**
  Department of Earth Sciences
  Doctor of Philosophy (PhD) **2024**
- **University of Calgary**
  Department of Geoscience
  Masters of Science degree (MSc.) **2017**
  Bachelor of Science degree (BSc.) **2015**

Research interest

- Conservation paleoecology
- Community ecology
- Theoretical ecology
- Extinction
- Recovery
- Resilience

Certifications

- PADI open water
- Wilderness EMT
- Technical mountaineering
- Field Safety and management
- Future faculty teaching program

RESEARCH STATEMENT

My research centers on exploring metacommunity dynamics and the various factors that drive biodiversity across different spatial and temporal scales. I am especially fascinated by how these patterns shift and interact depending on the scale of analysis. My primary focus is on reef ecosystems, where I investigate the intricate and essential roles played by corals and sponges in shaping community structure, ecosystem function, and resilience over time.

EMPLOYMENT

Smithsonian Tropical Research institute **2024-Current**

Post-Doctoral Fellow

iincepta **2024-Current**

COO, co-founder

University of Southern California **2017-2024**

Graduate student and Teaching Assistant

University of Calgary **2015-2017**

Graduate student and Teaching Assistant

PUBLICATIONS

Published

Godbold, A., Clark, N., Cunningham, E. T., Bottjer, D. J., & Pandolfi, J. M. (2024). Temporal dynamics of Devonian reef communities: Insights into natural phase shifts and long-term resilience in the face of environmental variability. Palaeogeography, Palaeoclimatology, Palaeoecology, 648, 112264.

Cribb, A., **Godbold, A.,** van de Velde, S., Celestian, A., Bottjer, D., & Corsetti, F. Ecological and Geochemical Characterization of Early Cambrian Bioturbation Ecosystem Engineering Behaviors in the Deep Spring Formation, California, USA.

Cribb, A. T., Formoso, K. K., Woolley, C. H., Beech, J., Brophy, S., Byrne, P., ... & Bottjer, D. J. (2023). Contrasting terrestrial and marine ecospace dynamics after the end-Triassic mass extinction event. Proceedings of the Royal Society B, 290(2012), 20232232.

Foster, W., **Godbold**, A., et al., (2022). Palaeoecology of the Hiraiso Formation (Miyagi Prefecture, Japan) and implications for the recovery following the end-Permian mass extinction. PeerJ, 10.

Godbold, A., Schoepfer, S., Shen, S. and Henderson, C.M., 2017. Precarious ephemeral refugia during the earliest Triassic. Geology, 45(7), pp. 607-610

Submitted

Godbold, A., et al., (submitted). Ancient Frameworks as Modern Templates: Exploring Reef Rubble consolidation in an Ancient Reef System

FUNDING HISTORY

CONFERENCE HISTORY

FUNDING HISTORY

Principle Applicant
University of Southern California Graduate Student Fellowship
2021-2022. $32,000 USD

Principle Applicant
Geological Society of America Student Grant
2019. $2,000 USD

Principle Applicant
Paleontological Society Student Grant
2018. $1,500 USD

Principle Applicant (2018)
DAAD Graduate Student Fellowship
2018. $2,000 euros

Principle Applicant (2018)
NSERC Postgraduate Scholarships-Doctoral Program (PGS)
2018-2022. $64,000 CAD

Principle Applicant (2017)
Geological Society of America Student Grant
2017. $1,800 USD

Principle Applicant
Queen Elizabeth II Graduate (Ph.D) Scholarship
2017. $10,000 CAD

Principle Applicant
Queen Elizabeth II Graduate (Master's) Scholarship
2016. $10,000 CAD

Principle Applicant (2015)
NSERC Undergraduate Student Research Award
2015, $6,000 CAD

CONFERENCE HISTORY

Total conferences attended: 20
Total workshops taught: 4
Total invited talks: 4
Total sessions chaired: 5

GEOLOGICAL SOCIETY OF AMERICA ANNUAL CONFERENCE

*Indicates presenting author

Poster Presentation

Godbold, A.*, Henderson, CM., Schoepfer, SD., and Shuzhong, S., (2015). Earliest Triassic refuge at Shangsi China: A potential analog for modern marine crisis.

Oral Presentation

Godbold, A.*, Bottjer, DJ.,Pandolfi, JM., (2023). Community composition dynamics of Upper Devonian (~360 Ma) reefs found in the Canning Basin, Western Australia.

Formoso, K., Cribb, A., Woolley, C.*, Beech, J., Brophy, S., Byrne, PJ., Cassady, V., **Godbold, A.**, Larina, E., Maxeiner, P., Wu, Y., Corsetti, F., Bottjer, D., (2022). Decoupled terrestrial and marine ecological recovery after the End-Triassic mass extinction.

Godbold, A.*, Raut, Y., Hohmann, N., Jarochowska, E., Kiessling, W., Bottjer, DJ., (2022). Do rubble beds hold potential for reef development?

CONFERENCE HISTORY

Formoso, K., Cribb, A., Woolley, C.*, Beech, J., Brophy, S., Byrne, PJ., Cassady, V., **Godbold, A.**, Larina, E., Maxeiner, P., Wu, Y., Corsetti, F., Bottjer, D., (2021). Contemporaneous changes in terrestrial and marine functional ecology during ancient and modern mass extinction events: An ecospace cube approach.

Godbold, A.*, Hohmann, N., Jarochowska, E., Kiessling, W., Bottjer, DJ., (2021). Changes in community membership amongst patch-reefs of the Norian-Rhaetian Dachstein platform.

Smith, IE., **Godbold, A.**, Bottjer, DJ., (2019). Quantifying the Influence of Inter-Observer Variation and Medium Type (Thin-Section Versus Polished Slab) on Alpha Diversity Estimates.

Cothren, HR., Schoepfer, S., **Godbold, A**., (2019). Effects of Background Volcanism on an Early Jurassic Coral Reef.

Godbold, A.*, Hohmann, N., Jarochowska, E., Kiessling, W., Bottjer, DJ., (2019). Spatio-temporal diversity dynamics in Norian (Late Triassic) Gosaukamm Patch-Reefs in Austria.

Thompson, JR.*, Petsios, E., **Godbold, A.**, Bottjer, DJ., (2018). The Permian-Triassic macroevolutionary history of echinoids.

Godbold, A.*, Schoepfer, SD., Henderson, CM., Isozaki, Y., (2017). Did oceanic islands act as refugia during the end-Permian extinction?

35th INTERNATIONAL GEOLOGICAL CONGRESS

Oral Presentation

Godbold, A.*, Schoepfer, SD., Henderson, CM., (2016). Earliest Triassic Ephemeral Refuge at Shangsi, China.

NORTH AMERICAN PALEONTOLOGICAL CONVENTION

Poster Presentation

Godbold, A.*, Hohmann, N., Jarochowska, E., Kiessling, W., Bottjer, DJ., (2019). Spatial differences in taxonomic composition amongst Upper Triassic patch reef deposits within the Gosaukamm Reef.

Oral Presentation

Godbold, A.*, Bottjer, DJ.,Pandolfi, JM., (2024) Temporal Dynamics of Devonian Reef Communities: Insights from a 3.9 Million-Year Study in Western Australia.

OCEAN SCIENCES CONFERENCE

Poster Presentation

Godbold, A.*, Schoepfer, S., Cothren, H., Bottjer, DJ., (2020). Lessons from an ancient coral reef refuge: Ecological and geochemical characteristics of a precarious Early Jurassic reef.

15th INTERNATIONAL CORAL REEF SYMPOSIUM

Oral Presentation

Godbold, A.*, Raut, Y., Hohmann, N., Jarochowska, E., Kiessling, W., Bottjer, DJ., (2022). Patch-reef development within rubble beds found in the Upper Triassic Dachstein platform of the Northern Calcareous Alps in Austria.

INVITED TALKS

INTERNATIONAL FOSSIL CORAL AND REEF SOCIETY EARLY CAREER RESEARCH SYMPOSIUM

Godbold, A.*, James C., Hohmann, N., Jarochowska, E., Kiessling W., Corsetti FA., Bottjer, DJ., (2024). Ancient Frameworks as Modern Templates: Exploring Reef Rubble consolidation in an Ancient Reef System

CONFERENCE HISTORY

Godbold, A.*, Raut, Y., Hohmann, N., Jarochowska, E., Kiessling, W., Bottjer, DJ., (2020). The Calm Before the Storm: A Detailed Look Into the Community Membership of Late Triassic Patch-Reefs Occurring Before the End-Triassic Mass Extinction.

SOUTH COAST GEOLOGICAL SOCIETY

Godbold, A.*, Bottjer, DJ., (2019). Community Membership of Australian's First Great Barrier Reef.

SoCal PALEONTOLOGICAL SOCIETY

Godbold, A.*, Bottjer, DJ., (2019). Understanding the Current Coral Reef Crisis Using the Fossil Record.

CONFERENCE SESSION CHAIRMANSHIP

GEOLOGICAL SOCIETY OF AMERICA ANNUAL CONFERENCE

Technical Sessions

Amanda Lynn **Godbold**, Jeanette Pirlo, Jood Al Aswad, (2022) No mistakes, only happy accidents: Cutting-edge research that is still in the troubleshooting stages. Session T114.

Amanda Lynn **Godbold**, Alison T. Cribb, Andrew D. Putt, Rowan C. Martindale, Victoria A. Petryshyn, Lydia S. Tackett, Trinity L. Hamilton, David Gold and Simon A.F. Darroch, (2020) New Voices in Geobiology. Session 214.

William J. Foster, Amanda Lynn **Godbold** and Erin Saupe, (2020) Quantitative Paleobiology of Marine Ecosystems. Session 112.

Trinity L. Hamilton, Rowan C. Martindale, Victoria Petryshyn, Simon A.F. Darroch, Lydia S. Tackett, David Gold, Andrew D. Putt, Amanda Lynn **Godbold**, Daniel S. Jones, Kathryn Hobart and Joshua Feinberg, (2019) New Voices in Geobiology. Session 41.

Victoria A. Petryshyn, Lydia S. Tackett, Rowan C. Martindale, Simon A.F. Darroch, Amanda Lynn **Godbold** and Anna M. Weiss, (2018) New Voices in Geobiology. Session 204.

15th INTERNATIONALCORAL REEF SYMPOSIUM

Technical Session

Thomas Felis, Georg Heiss, Kristine DeLong, Amanda **Godbold** (2022) Open Session: Reef Environments and Climate of the Past. Session 1A.

WORKSHOPS

The courses outlined below are tailored iterations designed to meet the unique needs of each conference demographic. These workshops focus on developing essential skills in project, time, and team management. They combine instructional content with engaging activities, ensuring that participants leave with a clearly defined three-month plan, complete with timelines, milestones, and communication strategies for collaborators. For more information check out our website: www.iincepta.com

NORTH AMERICAN PALEONTOLOGICAL CONVENTION

Innovative Tools for Project Management in Academia 2024

EARTH EDUCATORS' RENDEZVOUS

Innovative Tools for Project Management in Academia 2024

GEOLOGICAL SOCIETY OF AMERICA ANNUAL CONFERENCE

Innovative Tools for Project Management in Academia 2023

PROFESSIONAL SERVICE

SEMINARS

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

Tools for Collaborative Project Management in Academia

UNIVERSITY OF SOUTHERN CALIFORNIA

Tools for Collaborative Project Management in Academia

Strategies for Fostering Inclusivity in the Classroom

Introducing USC's Office of Student Accessibility Services

PROFESSIONAL SERVICE

COMMITTEES

Student Representative (2021-2023) Conservation Paleobiology Network Diversity Committee.

Student Representative (2021-2023) Paleontological Society Development Committee.

Student Representative (2021-2022) University of Southern California Women in Science and Engineering Liaison for Earth Sciences.

Student Representative (2020) University of Southern California Diversity Task Force.

Planning committee (2020) 17th Annual Southern California Geobiology Symposium committee.

Student Representative (2018) The Moore Medal is awarded by the Society of Sedimentary Geology (SEPM) in recognition of excellence in Paleontology.

Student Representative (2017-2021) Geobiology and Geomicrobiology GSA Division.

PEER REVIEWER

- Palaeogeography, Palaeoclimatology, Palaeoecology
- Global and Planetary Change

MENTORSHIP

STUDENT RESEARCH PROJECTS

This is a list of students who completed research with my supervision or co-supervision.

Javier Pardo (2024) Fellow at the Smithsonian Tropical Research Institute. Refining the Stratigraphy of the Panama Paleontological Project.

Allison Paik (2021) High school student. Corallite size as an indicator of environmental perturbation.

Shreya Agrawal (2021) Undergraduate student. Temporal changes in functional diversity within patch-reefs found within the Dachstein Platform.

Helen Burch (2021) Undergraduate student. Depositional model of the Late Triassic Dachstein Platform, Northern Calcareous Alps, Austria.

Andrea Vidican (2020) High school student. Corallite size as an indicator of environmental perturbation.

Isaiah Smith (2019) Undergraduate student. Quantifying the Influence of Inter-Observer Variation and Medium Type (Thin-Section Versus Polished Slab) on Alpha Diversity Estimates.

Oliver Eisenberg (2018) Undergraduate student. Coral Reef Connectivity and Resilience During the End-Triassic Extinction.

FIELD EXPERIENCE

FIELD EXPERIENCE

Number of research excursions lead: 7 **Total number of research excursions: 8**

Number of certified field courses taken: 7 **Number of field courses taught: 2**

RESEARCH EXPEDITION

This is a list of research excursions I have participated in. The lead logistical organizer and team leader are highlighted in gold and marked with an asterisk (*). The terrain classification follows the Yosemite Decimal System.

Field excursion team: **Aaron O'Dea***, Sean Connolly, Sven Pallacks, Javier Pardo, Godbold, A. **Year:** 2024 **Location:** Panama **Length of time:** 6 days **Type of Terrain:** Marine/Subtropical. **Involved:** Boating/snorkelling to different sections. Sample collection and exploration. **Difficulty of terrain:** Class 2

Field excursion team: **Godbold, A.***, Clark N, Cunningham ET, Gilhart C. **Year:** 2022 **Location:** Western Australia. **Length of time:** Three months. **Type of Terrain:** Desert. **Involved:** Ground camping in an extremely remote location. Measuring sections, sample collection, method development. **Difficulty of terrain:** Class 2

Field excursion team: **Godbold, A.***, Schoepfer, S. **Year:** 2019 **Location:** Canada, British Columbia. **Length of time:** Three weeks. **Type of Terrain:** Mountainous. **Involved:** Ground camping in an extremely remote location. Repelling off a cliff for sample collection. Measuring section, sample collection, method development. **Difficulty of terrain:** Class 5

Field excursion team: **Godbold, A.***, Pandolfi, J. **Year:** 2019 **Location:** Western Australia. **Length of time:** Two weeks. **Type of Terrain:** Desert. **Involved:** Ground camping in an extremely remote location. Measuring section, sample collection, method development. **Difficulty of terrain:** Class 2

Field excursion team: **Godbold, A.***, Hohmann, N., Jarochowska, E. **Year:** 2018 **Location:** Austria. **Length of time:** Two weeks. **Type of Terrain:** Mountainous. **Involved:** Involved hiking everyday to collect samples, measure sections, and develop methods. **Difficulty of terrain:** Class 4

Field excursion team: **Godbold, A.***, Henderson, CH., Schoepfer, S. **Year:** 2016 **Location:** Canada, British Columbia. **Length of time:** Two weeks. **Type of Terrain:** Mountainous. **Involved:** Ground camping in an extremely remote location. Measuring section, sample collection, method development. **Difficulty of terrain:** Class 3

Field excursion team: **Godbold, A.***, Henderson, CH., Isozaki, Y., Foster, W., Tobita, T., Oji, T. **Year:** 2016 **Location:** Japan. **Length of time:** Four months. **Type of Terrain:** Mountainous. **Involved:** Measuring section, sample collection, method development. **Difficulty of terrain:** Class 3

Field excursion team: Godbold, A., **Henderson, CH.***, Shuzhong, S. **Year:** 2014 **Location:** China**. Length of time:** One month. **Type of Terrain:** Mountainous. **Involved:** Measuring section, sample collection, method development. **Difficulty of terrain:** Class 2

FIELD COURSES

Introductory Geological Field Methods Course. GLGY 337. University of Calgary.
Skills: field survival and safety; orienteering using a compass and GPS; reading topographic maps and air photos; collecting geological field data; creating and interpreting geologic maps and cross sections; and reconciling the regional tectonic framework of the field area.

Senior level field methods course. GLGY 435. University of Calgary.
Skills: Describing and interpreting sedimentary rocks in the field; Gain familiarity with a variety of lithologies in the field and the corresponding evolution of depositional and tectonic settings within a given sedimentary basin; Carry out a mapping project in a complex geological terrain to gain familiarity with the effect of folding; and faulting and fracturing on rock bodies.

Advanced field methods course. GLGY 537. University of Calgary.
Skills: Develop advanced skills in mapping and field-based sedimentology (clastic and/or carbonate); Construct maps, cross sections and measured sections based on detailed field observations; interpolate local, small-scale field observations at several widely separated localities to infer regional tectonic setting; geometric and stratigraphic relationships; origin of rock units and their history of emplacement.

FIELD EXPERIENCE

Geophysics Field School. GOPH 549. University of Calgary.
The geophysics field school provides students with opportunities to design, plan and execute a variety of geophysical and geological surveys, including seismic, gravity, magnetic, electromagnetic, resistivity, induced polarization and topographic surveys. You will work together to deploy geophysical equipment, collect the resulting data, and process it, then prepare the resulting interpretations for presentation.

Field safety leadership. Geological Society of America Short Course.
The overall goal of this course was to acquire and practice strategies and tactics to prepare for, conduct, and evaluate safe and effective field activities. The course covers how to evaluate the range of risks encountered in the field, quantitative analysis of injuries and illnesses that commonly occur during field activities, why accidents happen (human factors analysis), and the field safety process in normal operations and emergency response through pre-course reading and videos, scenario analysis, and problem solving.

Taphonomic and ecological processes in tropical environments. Gerace Research Centre.
This 5-week course focused on graduate-level research involving the taphonomy and ecology of late Quaternary to Recent environments of San Salvador Island (the Bahamas), including both marine and terrestrial settings. Each student developed an independent research project based on field, experimental, and/or laboratory data.

Modern Coral Reef Ecology. Bermuda institute of ocean sciences.
Skills: Reef surveys—transects, quadrats, photomosaics; Reef community metabolism & calcification via gradient flux; Collecting corals for laboratory experiments; Measuring the underwater light field and seafloor optical properties; Coral community metabolism & calcification at different temperatures via flow respirometry; Coral optical properties; Demo of total alkalinity measurements required for calculating calcification rates.

TEACHING EXPERIENCE

TEACHING EXPERIENCE

EDUCATION TRAINING

Project explorer. GEOG 597. University of Calgary
This teaching course connected undergraduate students with elementary school teachers, providing undergraduates with the unique opportunity to actively contribute to curriculum development. Participants were involved in designing curriculum components, teaching modules, and creating assignments. This hands-on experience allowed undergraduate students to engage deeply with educational practices while fostering collaboration and innovation in the classroom.

SAGES (Scholars in Advancing Graduate Education in STEM). University of Calgary
The SAGES Program Teaching Scholars initiative was designed specifically for graduate students, combining engaging lectures with hands-on mentorship. Participants were paired with professors, providing them with the opportunity to design curriculum components and create corresponding lab activities to enhance student learning. The program emphasized innovative teaching strategies and introduced participants to cutting-edge educational technologies, fostering creativity and professional development in graduate-level educators.

Future faculty teaching program. University of Southern California
The Future Faculty Teaching Institute is a comprehensive training program designed for USC graduate students and postdoctoral fellows, equipping them with the foundational skills and knowledge needed to excel in teaching. This program prepares aspiring faculty members by providing essential insights into effective course design and innovative teaching practices, laying the groundwork for excellence in their academic careers.

COURSES TAUGHT

Introductory Geological Field Methods Course. GLGY 337. University of Calgary.

Invertebrate paleontology. GLGY 501. University of Calgary.

TEACHING ASSISTANT

University of Calgary

- GLGY 201 Introduction to Geology
- GLGY 333 Igneous, Metamorphic and Ore
- GLGY 431 Igneous Petrology
- GLGY 493 Evolution of Earth Through Time
- GLGY 587 Advanced Invertebrate Paleontology

University of Southern California

- GEOL 150 Climate Change
- GEOL 126 History of Life on Earth
- GEOL 433 Paleontology and Evolution
- GEOL 107 Oceanography

VOLUNTEERING

VOLUNTEERING

2021 Friends for Youth - Mentoring at risk-youth

2021 Venture Search and Rescue Team, Los Angeles

2020 Discovery Day at Raymond M. Alf Museum of Paleontology

2018 Discovery Day at Raymond M. Alf Museum of Paleontology

2016 Big Brother Big Sisters - Mentoring at risk-youth