

DR. KASEY CLARK

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EMPLOYMENT

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| Lecturer in Environmental Change, Department of Geography and Planning, School of Environmental Sciences, University of Liverpool, UK | 2022 to present |
| Postdoctoral Fellow, Smithsonian Tropical Research Institute (STRI), Panama <ul style="list-style-type: none">• Advisor: Rachel Collin (STRI/MarineGEO)• Collaborators: Gino Pawlak & Sarah Giddings (UCSD); Kristen Davis (UC Irvine)• <i>Theme: Rainfall, river hydrology and nutrient flux contribution into a Caribbean tropical bay with seasonal hypoxia</i>• NSF OCE Grant: Physical processes in the formation and breakdown of hypoxia in a tropical bay• Fieldsite: Almirante Bay, Bocas del Toro, Panamá• Website: Understanding the freshwater input in Bahia Almirante, Bocas del Toro, Interview: STRI Story | 2019 to 2022 |
| Postdoctoral Researcher, STRI, Panama <ul style="list-style-type: none">• Project head: Rosa Maria Roman-Cuesta (CSIC-MNHN)• Collaborators: Steve Paton (STRI), Ilka Feller (Smithsonian Environmental Research Center - SERC), Omar López (SENACYT)• <i>Theme: Hypotheses and drivers of mangrove dieback during extreme El Niño drought in the Bay of Panama, Pacific coast</i>• Project: Coastal and marine resilience of biodiversity to extreme events in the Caribbean | 2020 to 2021 |
| Smithsonian Fellow, STRI, Panama <ul style="list-style-type: none">• Advisor: Robert Stallard (STRI/Agua Salud/USGS)• Collaborators: Jefferson Hall (STRI/Agua Salud/ForestGEO)• <i>Theme: River biogeochemistry in catchments with varying land-use in the Panama Canal Watershed</i> Project video• Fieldsite: Agua Salud, Panamá | 2018 - 2019 |
| Postdoctoral Research Fellow, Department of Geography, University of Calgary, Canada <ul style="list-style-type: none">• Advisor: Yvonne Martin (University of Calgary)• <i>Theme: Vegetation mapping of the Kananaskis floodplain through remote sensing and field surveys to assess vegetation erosion during a 150-year flood</i>• Fieldsite: Kananaskis Valley, Rocky Mountains, Alberta, Canada | 2017 - 2018 |
| Sessional Lecturer, Department of Geography, University of Calgary, Canada <ul style="list-style-type: none">• Global Water Resources (GEOG-315)• Taught 50% of the course | 2017 |

Postdoctoral Research Associate, Department of Earth & Environmental Science, University of Pennsylvania, USA **2014 - 2016**

- Advisor: Alain Plante (University of Pennsylvania)
- Collaborators: Robert Stallard (USGS), William McDowell (UNH)
- *Theme: solute, suspended sediment, particulate organic carbon, and particulate nitrogen river flux modelling in the Luquillo Critical Zone Observatory in Puerto Rico*
- Fieldsite: Luquillo Mountains Puerto Rico, USA

RESEARCH INTERESTS

Environmental science, River biogeochemistry, Carbon cycling, River physical-chemistry and nutrients, Catchment hydrology, Remote sensing/GIS Science, Landslide dynamics, Tropics, Mountain systems, Land-ocean interface, and Critical zone science.

EDUCATION

DPhil, School of Geography and the Environment, University of Oxford, UK **2008-2014**

- Supervisor: Prof. Yadvinder Malhi and Mark New (University of Oxford)
- Primary collaborators: A. Joshua West (University of Southern California) and Robert Hilton (University of Oxford)
- *Title: Pattern and drivers of riverine particulate organic carbon transport in an Andean valley*
- Field site: Peruvian Andes and Amazon lowlands, Peru

University Teaching and Learning, Taylor Institute for Teaching and Learning, University of Calgary, Canada **2017-2018**

Postdoctoral Scholar Certificate in University Teaching and Learning

- Scholarship of Teaching and Learning Foundations for Postdocs
- Emerging Teachers Development
- Theories and Issues in Postsecondary Teaching and Learning
- Learning Spaces and Digital Pedagogy
- Developing your Teaching Dossier

Teaching Online Program

Blended Instructional Skills Workshop

Course Design Program 2017

M.Sc., Department of Plant Science, McGill University, Canada, and the Smithsonian Tropical Research Institute (STRI), Panama **2005-2008**

- Supervisors: Timothy Johns (McGill University) and Todd Capson (STRI/International Cooperative Biodiversity Groups (ICBG)-Panama)
- *Theme: Marine chemical ecology and natural products chemistry*
- Field site: Coiba Island, Panama
- Laboratories: STRI, University of Panama, Chemistry; Smithsonian Marine Station in Fort Pierce, INDICASAT - Panama

B.Sc., Honours in Physical Geography, University of Windsor, Canada **2001-2005**

- Minor in chemistry, and French language cluster

PEER-REVIEWED PUBLICATIONS

2022

- **Clark, K. E.**, Stallard, R. F., Murphy, M. A., Scholl, M. A., Gonzalez, G., Plante, A. F., McDowell, W. H. (2022), Extreme rainstorms drive exceptional organic carbon export from forested humid-tropical rivers in Puerto Rico, *Nature Communications*, doi:10.1038/s41467-022-29618-5.
- **Clark, K. E.**, Bravo Vergara, V. D., Giddings, S. N., Davis, K. A., Pawlak, G., Torres, M. A., Adelson, A. E., César, C. I., Boza, X., Collin, R. (2022) Land use and land cover shape river water quality at a Continental Caribbean land-ocean interface, *Frontiers in Water*, 4, 1-19, doi:[10.3389/frwa.2022.737920](https://doi.org/10.3389/frwa.2022.737920).

2021

- **Clark, K. E.**, Capper, A., Lui, W. T., Fenner, A. M., Almanza, A., Della Togna, G., Herrera, L., Johns, T., Paul, V. J., Dorrestein, P. C., Capson, T. L., and Balunas, M. J. (2021) Sequestration and Cyanobacterial Diet Preferences in the Opisthobranch Molluscs *Dolabrifera nicaraguana* and *Stylocheilus rickettsi*, *Frontiers in Marine Science*, 8, 1-14, doi: [10.3389/fmars.2021.766282](https://doi.org/10.3389/fmars.2021.766282).
- Freund, C. A., **Clark, K. E.**, Curran, J. F., Asner, G. P., Silman, M. R. (2021), Landslide age, elevation and residual vegetation determine tropical montane forest canopy recovery and biomass accumulation after landslide disturbances in the Peruvian Andes, *Journal of Ecology*, 0, 1-17, doi:[10.1111/1365-2745.13737](https://doi.org/10.1111/1365-2745.13737).

2017

- **Clark, K. E.**, Hilton, R. G., West, A. J., Robles Caceres, A., Grocke, D. R., Marthews, T., Ferguson, R. I., R., Asner, G. P., New, M., and Malhi Y. (2017) Erosion of organic carbon from the Andes and its effects on ecosystem carbon dioxide balance, *Journal of Geophysical Research Biogeosciences*, 122, 449-469, doi:[10.1002/2016JG003615](https://doi.org/10.1002/2016JG003615).
- **Clark, K. E.**, Shanley, J. B., Scholl, M. A., Perdrial, N., Perdrial, J. N., Plante, A. F., McDowell, W.H., (2017), Tropical river sediment and solute dynamics in storms during an extreme drought, *Water Resources Research*, 53,3695-3712, doi: [10.1002/2016WR019737](https://doi.org/10.1002/2016WR019737).
- Torres, M. A., Baronas, J. J., **Clark, K. E.**, Feakins, S. J., West, A. J. (2017), Mixing as a driver of temporal variations in river hydrogeochemistry. Part 1: insights from water isotopes in the Andes-Amazon, *Water Resources Research*, 53, 3102-3119, doi: [10.1002/2016WR019733](https://doi.org/10.1002/2016WR019733).
- Baronas J. J., Torres, M. A., **Clark, K. E.**, West, A. J. (2017), Mixing as a driver of temporal variations in river hydrogeochemistry. Part 2: Major and trace element concentration dynamics in the Andes-Amazon, *Water Resources Research*, 53, 3120-3145, doi:[10.1002/2016WR019729](https://doi.org/10.1002/2016WR019729).

2016

- **Clark, K. E.**, West, A. J., Hilton, R. G., Asner, G. P., Quesada, C. A., Silman, M. R., Saatchi, S. S., Farfan-Rios, W., Martin, R. E., Horwath, A. B., Halladay, K., New, M., and Malhi, Y. (2016) Storm-triggered landslides in the Peruvian Andes and

implications for topography, carbon cycles, and biodiversity, *Earth Surface Dynamics*, 4, 47-70, doi:[10.5194/esurf-4-47-2016](https://doi.org/10.5194/esurf-4-47-2016).

- Torres, M.A., West, A.J., **Clark, K.E.**, Paris, G., Bouchez, J., Ponton, C., Feakins, S.J., Galy, V. and Adkins, J. (2016) The acid and alkalinity budgets of weathering in the Andes-Amazon system: Insights into the erosional control of global biogeochemical cycles?, *Earth and Planetary Science Letters*, 450, 381-391, doi:[10.1016/j.epsl.2016.06.012](https://doi.org/10.1016/j.epsl.2016.06.012).

2015

- Torres, M. A., West, A. J., and **Clark, K. E.** (2015) Geomorphic regime modulates hydrological control of chemical weathering in the Andes-Amazon, *Geochimica et Cosmochimica Acta*, 166, 105-128, doi:[10.1016/j.gca.2015.06.007](https://doi.org/10.1016/j.gca.2015.06.007).

2014

- **Clark, K. E.**, Torres, M. A., West, A. J., Hilton, R. G., New, M., Horwath, A.B., Fisher, J.B., Rapp, J.M., Robles Caceres, A., and Malhi, Y. (2014) The hydrological regime of a forested tropical Andean catchment, *Hydrology and Earth Systems Science*, 18, 5377-5397, doi:[10.5194/hess-18-5377-2014](https://doi.org/10.5194/hess-18-5377-2014).

2013

- **Clark, K. E.**, R. G. Hilton, A. J. West, Y. Malhi, D. R. Grocke, C. L. Bryant, P. L. Ascough, A. Robles C., and M New. (2013) New views on 'old' carbon in the Amazon River: Insight from the source of organic carbon eroded from the Peruvian Andes, *Geochemistry, Geophysics, Geosystems*, 14, 1644-2027, doi:[10.1002/ggge.20122](https://doi.org/10.1002/ggge.20122).
- **Clark, K. E.**, Capper, A., Della Togna, G., Paul, V. J., Romero, P., Johns, T., Cubilla-Rios, L., and Capson, T. L. (2013) Ecology – and bioassay-guided drug discovery for treatments of tropical disease: 5a,8a-Epidioxycholest-6-en-3β-ol isolated from the anaspidian mollusc *Dolabrifera dolabrifera* shows significant activity against *Leishmania donovani*. *Natural Products Communications*, 8 (11) 1537 - 1540.

2009

- Oestreicher, J. S., Benessaiah, K., Ruiz-Jaen, M. C., Sloan, S., Turner, K., Pelletier, J., Guay, B., **Clark, K. E.**, Roche, D., Meiners, M., and Potvin, C. (2009) Avoiding deforestation in Panamanian protected areas: An analysis of protection effectiveness and implications for reducing emissions from deforestation and forest degradation. *Global Environmental Change*, 19 (2) 279-291, doi:[10.1016/j.gloenvcha.2009.01.003](https://doi.org/10.1016/j.gloenvcha.2009.01.003).

THESES

- **Clark, K. E.** (2014) Pattern and drivers of riverine particulate organic carbon transport in an Andean valley, 289 pp, Doctor of Philosophy, Geography and the Environment, University of Oxford, Oxford, UK.

- **Clark, K. E.** (2008) Marine chemical ecology: The search for sequestered and bioactive compounds in the sea hares *Dolabrifera dolabrifera* and *Stylocheilus striatus* and in their preferred food the cyanobacterium, *Lyngbya majuscula*, 102 pp, Master of Science, Plant Sciences, McGill University, Montreal, Canada.

ADVANCED DRAFT MANUSCRIPTS

- **Clark, K. E.**, Feller, I. C., López Alfano, O. R., Lovelock, C. E., Paton, S., Cruz, L. G., Santos, A., De Sedas, A., Herrera, J., Román Cuesta, R. M. (aim – *Scientific Reports*) Mangrove dieback in the Pacific during the severe 2015-2016 El Niño drought.

RESEARCH GRANTS AND OTHER PROJECTS

- (NGO funded project) Fundación para la conservación de los recursos naturales (Natura) in partnership with Asociación Centro de Estudios y Acción Social Panameño (CEASPA), Holness, D., Candanedo I., Ibañez, A., **Clark, K.**, Herrera J., "Mitigating the impact of COVID19 on the wetlands of Matusagaratí, Darien, Panama, through non-formal environmental education and declaration as a RAMSAR site" **2020 -2021**
- Smithsonian Tropical Research Institute (STRI) COVID supplementary postdoctoral fund, **Clark, K.**, River hydrology, physical chemistry, and biogeochemical process in rivers of Bocas del Toro, Panama **2020**
- Smithsonian Tropical Research Institute (STRI) Short Term Fellowship, **Clark, K. E.**, with Advisors Stallard, R., Larsen, M., and Turner, B. "Export of river particulate organic carbon (POC) within the Panama Canal Watershed" **2017**
- Natural Environment Research Council (NERC) and Cosmogenic Isotope Analysis Facility, Hilton, R., Densmore, A., West, A.J. and **Clark, K.E.**, "Constraining denudation rate in the Peruvian Andes: The origin of ^{10}Be -depleted quartz in the Madre de Dios River" **2012**
- NERC Radiocarbon Facility, Hilton, R. G., **Clark, K. E.**, et al., "Climate-driven erosion of soil and vegetation in an Andean river catchment: Insights from the Delta ^{14}C of particulate organic carbon during floods" **2010**

AWARDS AND SCHOLARSHIPS

Reviewer

- Fiona Kirkby Award, in recognition of outstanding contribution to the journal by reviewers, Earth Surfaces Processes and Landforms **2020**

Doctorate

- Clarendon Scholarship (Oxford University), Natural Sciences and Engineering Research Council (NSERC 362718-2008 PGS-D3), and Overseas Research Scholarship (UK government) **2008-2011**

Master's

- NSERC Alexander Graham Bell Graduate Scholarship – Master's (CGSM), and STRI-McGill-NEO Fellowship **2005-2007**

Bachelors

- National Award of Excellence Scholarship from the Millennium Foundation, NSERC Undergraduate Student Research Award, and Board of Governors Medal in Earth Science **2001-2006**

CONFERENCE ABSTRACTS

2022

- Kastner, S., Giddings, S., Pawlak, G., Adelson, A., **Clark, K.**, Collin, R., Davis, K., (2022) Interactions between the Caribbean Current, the Panama-Colombia Gyre, and Bahia Almirante, Ocean Sciences Meeting, virtual event.

2021

- Russo, K., **Clark, K.**, Collin, R., Bravo, V., Cesar, C., Boza, X., Torres, M., (2021) Effect of river-seawater mixing on silica concentrations in Almirante Bay, Panama, AGU Fall Meeting, New Orleans, Louisiana, USA - poster.
- Freund, C. A., **Clark, K.**, Curran J. F., Asner, G. P., Silman, M. R., (2021) Tropical montane forest canopy recovery and biomass accumulation after landslide disturbances across a Peruvian Andean elevational gradient, Ecological Society of America, Virtual.
- Torres, Chapela-Lara, **Clark**, Collin, Hou, Larsen, Lopez-Lloreda, Kemeny, McDowell, Russo, (2021) The evolution of Earth's surface from the perspective of modern rivers, Geological Society of America, Portland, Oregon, USA - oral.

2020

- Torres, M. A., **Clark, K. E.**, Collin, R., Hou, Yi., Larsen, W., Bravo, V., Cesar, C., Boza X. (2020) Hydrochemical monitoring of rivers in the Bocas del Toro region of Panama: Insights into impacts on coastal environments, AGU Fall Meeting, Virtual - poster.

2019

- West, J. A., Burt, E., **Clark, K. E.** (2019) The Madre de Dios River basin of Peru: a catchment observatory across scales covering the Andes-Amazon mountain-to-floodplain transition, AGU Fall Meeting, San Francisco, California, USA – poster.

2017

- **Clark, K. E.**, Stallard, R. F., Shanley, J. B., Scholl, M. A., Plante, A. F., Perdrial, J. N., Murphy, S. F., Perdrial, N., Gonzalez, G., McDowell, W. H. (2017) River particulate load transport, drivers and yields in the Luquillo Mountains in Puerto Rico, NSF CZO All-Hands Meeting, Arlington, Virginia, USA – poster.
- **Clark, K. E.**, Shanley, J. B., Stallard, R. F., Scholl, M. A., Plante, A. F., Perdrial, J. N., Murphy, S. F., Perdrial, N., Gonzalez, G., McDowell, W. H. (2017) Impacts of

extreme climate events - drought and hurricane - on carbon and nitrogen in streams draining the Luquillo Mountains in Puerto Rico, AGU Chapman conference on Extreme Climate Events Impacts on Aquatic Biogeochemical Cycles and Fluxes, San Juan, Puerto Rico, USA – poster.

- Scholl, M., van Beusekom, A., **Clark, K.**, Shanley, J., Torres-Sanchez, A., Murphy, S., Gonzalez, G. (2017) The role of mountain precipitation as a drought buffer in Puerto Rico: Assessing the natural system and resilience to change, AGU Fall Meeting, New Orleans, Louisiana, USA - poster.
- Perdrial, N., **Clark, K. E.**, Shanley, J. B., Plante, A. F., McDowell, W. H. (2017) Can the mineralogical signature of suspended sediments inform on the dynamics and resilience of river systems impacted by extreme climate events at Luquillo?, AGU Chapman conference on Extreme Climate Events Impacts on Aquatic Biogeochemical Cycles and Fluxes, San Juan, Puerto Rico, USA - poster.

2016

- **Clark, K. E.**, Shanley, J. B., Perdrial, N., Scholl, M. A., Perdrial, J. N., Plante, A. F., McDowell, W. H. (2016) Tropical river suspended load and solute dynamics in storms interrupting an extreme drought, Luquillo Critical Zone Observatory, Puerto Rico, AGU Fall Meeting, San Francisco, California, USA – oral.
- **Clark, K.**, Hilton, R., West, A. J., Robles Caceres, A., Grocke, D., Marthews, T., Asner, G., New, M., Malhi, Y. (2016) Erosion of particulate organic material from an Andean river and its delivery to the Amazon Basin, vol. 18, EGU2016-15210, EGU General Assembly, Vienna, Austria – Oral.
- Torres, M. A., Dellinger, M., **Clark, K. E.**, West, A. J., Paris, G., Bouchez, J., Ponton, C. (2016) Tectonic control of the acid and alkalinity budgets of chemical weathering, AGU Fall Meeting, San Francisco, CA. USA.
- Baronas, J. J., Torres, M. A., West, A. J., **Clark, K. E.** (2016) Mixing as a driver of temporal variations in river hydrochemistry. Part 2: Major and trace element concentration dynamics in the Andes-Amazon, AGU Fall Meeting, San Francisco, CA, USA.
- Dellinger, M., Hilton, R. G., West, A. J., Torres, M., Burton, K. W., **Clark, K. E.**, Baronas, J. J. (2016) Tracing oxidative weathering from the Andes to the lowland Amazon Basin using dissolved rhenium, AGU Fall Meeting, San Francisco, CA, USA.
- Burt, E., West, A. J., **Clark, K.**, Torres, M. (2016) Small catchments of the Andes-Amazon: zooming in to understand the big picture, AGU Chapman conference on Emerging Issues in Tropical Ecohydrology, Cuenca, Ecuador.
- Dellinger, M., Hilton, R. G., West, A. J., Torres, M., Burton, K., **Clark, K. E.** (2016) Rhenium as a tracer of oxidative weathering from the Andes to the lowland Amazon Basin, Goldschmidt, Yokohama, Japan.

2015

- **Clark, K. E.**, Plante, A. F., Willenbring, J. K., Jerolmack, D. J., Gonzáles, G., Stallard, R. F., Murphy, S. F., Vann, D. V., Leon, M., McDowell, W. H. (2015) River suspended

sediment and particulate organic carbon transport in two montane catchments in the Luquillo Critical Zone Observatory of Puerto Rico over 25 years: 1989 to 2014, AGU Fall Meeting, San Francisco, CA, USA – poster.

- Torres, M., West, A. J., Baronas, J. J., Ponton, C., **Clark, K. E.**, Feakins, S. J., and Galy, V. (2015) Floodplain modulation of solute fluxes from mountainous regions: the Amazonian Madre de Dios River case study, AGU Fall Meeting, San Francisco, CA, USA.
- Baronas, J.J., Torres, M., West, A.J., Hammond, D., **Clark, K.**, Opfergelt, S., and Burton, K., (2015) Combining Ge/Si, $\delta^{74}\text{Ge}$ to unravel controls on weathering and solute production in tropical catchments, Goldschmidt, Vienna, Austria.

2014

- Torres, M., **Clark, K.**, Feakins, S., Ponton, C., and West, J., (2014) Geomorphic control on mineral and fluid residence times and implications for the hydrochemistry of weathering, AGU Fall meeting, San Francisco, CA.
- Wang, R. Z., Pinedo-Gonzalez, P., **Clark, K. E.**, and West, A. J. (2014) Unexpected consequences: Gold mining in Peru and trace metal mobilisation, AGU Fall Meeting, San Francisco, CA.

2013

- **Clark, K. E.**, West, A. J., Hilton, R. G., Malhi, Y., Asner, G. P., Silman, M., Saatchi, S. S., Quesada, C., Farfan Rios, W., Martin, R., and New, M. G. (2013) Links between river incision, landslide activity, organic material erosion, and plant species diversity in an Andean Valley. AGU Fall Meeting, San Francisco, CA – Oral.
- Hilton, R. G., Galy, A., West, A. J., Hovius, N., Grocke, D. R., and **Clark, K.** (2013) Physical erosion and nitrogen export from mountain forests: Isotopic insight on nutrient loss. AGU Fall Meeting, San Francisco, CA, USA.
- West, A. J., Torres, M. A., Kleinsasser, E., **Clark, K.**, Asner, G. P., Malhi, Y., and Quesada, C. (2013) Geomorphic controls on availability of weathering-derived nutrients across an erosional gradient in the Andes. AGU Fall Meeting, San Francisco, CA, USA.

2012

- **Clark, K. E.**, Hilton, R. G., West, A. J., Grocke, D. R., Bryant, C., Robles A., Rao, Y., and New, M. (2012) Erosion of organic matter in a tropical mountain catchment: Implications for carbon delivery from the Andes to the Amazon River. *Mineralogical Magazine*, 76 (6) 1581. Goldschmidt conference, Montreal Canada. -oral
- Torres, M. A., **Clark, K.**, Paris, G., Adkins, J. F., West, A. (2012) Isotopic insights into sources of acid driving weathering across a mountain-floodplain transition in the Amazon headwaters of Peru, AGU Fall Meeting, San Francisco, CA, USA.

2011

- Torres, M. A., Ballew, N., **Clark, K.**, and West, A. J. (2011). The spatial variability of weathering processes in a Peruvian River System. AGU Fall Meeting, San Francisco, CA, USA.

PROFESSIONAL SERVICE – PEER REVIEW

Journal of Geographical Research - Biogeosciences	2021 & 2022
Geophysical Research Letters	2021
Nature Geoscience	2020
Journal of Hydrology	2020
Earth Surface Processes and Landforms (award won for contribution)	2020 & 2019
Nature Geoscience	2019
Earth Surface Dynamics Discussions	2019

TEACHING

Climate Change and Critical Review (ENVS389), University of Liverpool	2022
Laboratory in Physical Geography (ENVS165) Soil pH tutorial, University of Liverpool	2022

OTHER TEACHING EXPERIENCE

Weekly Earth System's reading group at the University of Calgary in the Department of Geography	2017
Tutorials for doctoral students in ArcGIS at the University of Oxford in the School of Geography and the Environment for students in geography, zoology, and earth science departments	2009
English as a foreign language and Canadian cultural teacher, Zaragoza, Aragon, Spain	2007-2008

SUPERVISION

University of Liverpool, eight undergraduate dissertation students	2022
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STUDENT ASSISTANCE AND MENTORING

Smithsonian Tropical Research Institute, Fiona Skerrett, undergraduate intern. Topic: Hourly rainfall and ERA5 atmospheric precipitation reanalysis comparison, Almirante Bay, Bocas del Toro, Panama	2021 - present
Smithsonian Tropical Research Institute, Viviana Bravo, Ximena Boza, and Carolina Cesar, MarineGEO Technicians. Topic: River hydrology, and river and marine geochemistry and physical chemistry in the Caribbean, Bocas del Toro, Panama	2019 - Present
University of Calgary, Liv Waldorf, MSc Student. Topic: Sediment movement in the Kananaskis River, Alberta, Canada	2017

University of Pennsylvania, Mayra Nunez, Work study student. Main Topic: EA analysis of river suspended sediment from LCZO	2015-2016
University of Pennsylvania, Michelle Pereira, Undergraduate summer student. Main Topic: XRD analysis of river suspended sediment from LCZO	2015
University of Southern California, Renee Wang. Topic: heavy metals in old river mining sites in Peru	2013-2015
Universidad Nacional de San Antonio Abad del Cusco, Arturo Robles Caceres. Diploma seminar topic: landslide vegetation diversity and regeneration	2009-2011
University of Southern California, BSc. Natalie Ballew. Undergraduate thesis topic: Andean and Amazon river hydrology	2010-2011
Durham University, MSc. Yanning Rao. Master's thesis topic: stable isotopes of carbon and nitrogen in Andean plants and soils	2009-2010

TEACHING AND LEARNING RESOURCES

Educational Online Game, Open Educational Resources, Theme: Critical Zone Science	2018
Educational Video, Theme: River geomorphology and floods in the Rocky Mountains	2018

COMMUNITY AND INSTITUTIONAL INVOLVEMENT

Participation in an artist and scientist workshop: Mini Flash Lab Arte y Ciencia, Estudio Nuboso, STRI, CO₂ as Robin Hood: Hero or Villian?	2019
Conference Volunteer: Postsecondary Learning and Teaching, Taylor Learning Institute for Teaching and Learning, University of Calgary	2018
Graduate Teaching and Learning Community of Practice, University of Calgary	2017-2018
Wellbeing in Higher Education Community of Practice (WHECoP), University of Calgary	2017-2018
The Working Mind Employee Programme, certified by the Mental Health Commission of Canada, University of Calgary	2017
Leader of a LCZO working group on river biogeochemistry in mountains of Puerto Rico during a tropical storm, Puerto Rico, USA	2016
Member of the University of Oxford graduate LGBTQ Society	2008-2014
Member of the Oxford University Women's Association Football Club (OUW AFC), Oxford, UK.	2010-2012
Environmental Change Institute student delegate at the United Nations Framework Convention on Climate Change (UNFCCC) 14 th and 15 th Conference of the Parties (COP) in Poznan, Poland and Copenhagen, Denmark.	2010 & 2009

- Scientific collaborator in and art exhibition “Amazonia” by Lucy and Jorge Orta, National History Museum, London, UK. **2010**
- Scientist on a Cape Farwell expedition to the Andes and Amazon. **2009**
Cultural response to climate change joining artists and scientists to inspire one another, Peru.
- Linacre College Capoeira Society leader, Oxford, UK. **2008-2009**

LANGUAGES

English (Native), Spanish (Fluent & Diploma Español como Lengua Extranjera Intermedio), Canadian French (Basic/Intermediate)

REFERENCES

- Director of Bocas del Toro Research Station **Rachel Collin** (Postdoctoral advisor), Smithsonian Tropical Research Institute (STRI), Apartado Postal 0843-03092, Panamá, República de Panamá. t: +507 212-8766, collinr@si.edu
- Research Scientist Dr. **Robert Stallard** (Smithsonian Fellowship Advisor), United States Geological Survey (USGS), and Research Scientist, Smithsonian Tropical Research Institute (STRI). US Geological Survey, 3215 Marine St, Bldg 6, Boulder, CO, 80303, USA. T: +1-303-541-3022, f: +1-303-541-3084, stallard@colorado.edu
- Professor **Yadvinder Malhi** of ecosystem science (DPhil supervisor), Environmental Change Institute, School of Geography and the Environment, University of Oxford, South Parks Road, Oxford, OX1 3QY, UK. T: +44-1865-285188, f: +44-1865-275885, yadvinder.malhi@ouce.ox.ac.uk
- Professor **Alain Plante** (Postdoctoral advisor), Department of Earth & Environmental Science, University of Pennsylvania, 251 Hayden Hall, 240 South 33rd Street, Philadelphia, PA 19104-6316, USA. t: +1-215-898-9269, f: +1-215-898-0964, aplante@sas.upenn.edu