



DEPARTMENT OF GEOGRAPHY & GEOLOGY

Dr. Donovan Campbell Head Of Department

OVERVIEW

At the beginning of the 2019/2020 academic year, the Department established a 5-year strategic plan (2019-2024) around six priority areas: staffing and administration; teaching and undergraduate curriculum; research and postgraduate programmes; finance and resource mobilization; outreach, visibility, and linkages and; infrastructure and work environment. The strategic plan is established on a vision for progressive and transformational change to support novel and societally relevant research and teaching while engendering a culture of staff success and happiness. For the year 2021-2022, the department focused on four main initiatives: the Quality Assurance Review (QAR), implementation of new courses under the revised Geography undergraduate programme, improving administrative processes, and infrastructure improvements.

The Department completed a QAR from April 4-9, 2022. The QAR Review Team met virtually with various administrators, staff, students, and external stakeholders to assess the progress of the Department since the last QAR. The Review Team also examined multiple departmental and institutional documents. Through this investigation, the Review Team congratulated the Department for its efforts, efficiency in arranging meetings, and hospitality during the investigation. In summary, the Review Team is satisfied that the Department of Geography and Geology remains the academic leader in Earth, Geographical, Climate, and Environmental Sciences for Jamaica and the Caribbean Region as a whole. Yet, there were several challenges facing the Department that needed attention. These include:

Staffing of current vacant positions is a priority. The most pressing need is to hire a hard-rock geologist. Additional strategic hires in climate change science, geospatial sciences, and physical geography will be important to the growth of the Department and the greater Institution.

Building and Infrastructure improvements are critical. The Department's building needs a structural assessment from an engineer. There are concerns about the quality, accessibility, and safety of the building. The Review Team believes that the condition of the building is jeopardizing the perception of the Institution, lessening morale, and creating problems with recruiting future students.

Improvement in communication among administrators, staff, and students are needed. Certainly, the COVID-19 pandemic created barriers to communication, yet many of the complaints heard in this investigation predate COVID. From the student's perspective, there were delays from faculty in returning graded assignments or feedback on theses and dissertations.

Curricular modifications would help modernize and streamline the program. For one, the Review Team suggests creating policies and laying out procedures for the new internship-based undergraduate programme. There were several questions from the Review Team and students about internships. The Department may consider the development of a taught MSc.

Fieldwork is fundamental to a Geography and Geology education, but dilapidated vehicles, decreasing budget, and the COVID-19 pandemic have drastically reduced field excursions. The Review Team suggests the Department to consider ways to reinstate field trips, especially within Level I courses.

The Department should leverage existing partnerships towards curricular and financial support. First, the Institution and Department should consider a pathway to collaborate with similar departments at other UWI campuses, especially St. Augustine. With development of virtual learning technologies, sharing curricular content across UWI is feasible.

Policies for consultancy need to lay out criteria for workload and financial distributions. The Department would benefit from a document that outlines how consultancy revenues are to be spent, how faculty balance consultancy work with their teaching loads, and how much involvement in

consultations projects should or should not come from students.

The Department worked with Campus Records Management to establish a proper filing system. The filing system was outdated and inefficient and there was a pervasive lack of documentation of internal procedures and protocols. The Department made significant progress towards digital transition and overall improvement in internal communication.

The Department made significant infrastructure improvements. The Sedimentology Lab was refurbished: countertops and counter cupboards have been replaced and resurfaced; and the sink was remounted, with improved water flow. The pantry underwent a significant overhaul: the counters, sink, cupboards, tiling, and storage area were upgraded. The male student bathroom and male staff bathroom sinks and countertops were redone, with improvements to water pressure. New air-conditioning units were installed to replace non-functioning units in the Senior Secretary's Office and the Map Room. Five 10-lb fire-extinguishers have been supplied to replace outdated extinguishers in the Department.

Drs. Michael Burn and Thomas Stemann continued their roles as coordinators for the Geography and Geology programmes respectively. Dr. Michael Burn resigned from the Department to take up a senior lectureship at John Moore's University in the United Kingdom. Since joining the Department in 2008 as lecturer in Climatology, Dr. Burn has made a significant contribution to research and teaching and has established a platform for locally-driven paleoenvironmental research across the Caribbean. Dr. Arpita Mandal continued to serve as Graduate coordinator. Dr. Thera Edwards served as coordinator for outreach activities. Mr. Kevin Tankoo was reappointed as the Research Fellow/Seismologist in the Earthquake Unit. Ms. Verdine Stephenson retired from her role as Administrative Secretary in the Earthquake Unit and Ms. Camille Wint was temporarily appointed in the post. Dr. David Miller went on official retirement at the end of the academic year.

Dr. Kinlocke was appointed as a Member of the Newport West Industrial Park Committee. Dr. Smith was appointed as Faculty Representative for the Faculty of Science and Technology, Board of Institute for Gender and Development Studies (IGDS). Dr. Smith was also awarded a Certification in University Teaching from The Centre for Excellence in Teaching and Learning (CETL) for completion of its 2-year programme. Dr. James-Williamson was

appointed as Chair for the Campus Committee on Examination; reappointed Associate Dean for Undergraduate Student Matters; reappointed to the Jamaica National Heritage Trust Declarations Committee; and re-elected Editor for the Caribbean Journal of Earth Sciences for the academic year.

Drs Sherene James-Williamson and Arpita Mandal hosted three students (Ronaldo Pierre, Stefan Clarke, and Shivanie Mahase) in the Department of Geography & Geology under the CCRIF Regional Internship Programme.

Dr. Thera Edwards hosted Profs. Ann Gow and Lorna Hughes from the University of Glasgow (U ofG) May 24- 26, 2022. Dr. Thera Edwards also served as a Member of the 2021 GIS Day and Geography Awareness Week Planning Committee; continued as Chairman of the Board of the Caribbean

Coastal Area Management Foundation

Dr. Donovan Campbell was appointed Co-Editor of a Special Issue in the Disasters journal; Review Editor for the Journal Frontiers in Climate; appointed to the Editorial Board for journal of Frontiers in Sustainable Food Systems; and Board member of the Land Information Council of Jamaica to serve for a period of three years (2021-2024).

The 2021-2022 academic year was the final year of Dr. Donovan Campbell's tenure as Head of the Department of Geography & Geology. Dr. Sherene James-Williamson was appointed as the new Head of Department for the period 2022-2025.

ACCESS

STUDENTS

One of the goals of the 2019-2024 strategic plan is to "fashion a geography and geology curriculum that promotes exposure to progressive and transferable technical and practical skills". A key output of this goal is the approval of the revised Geography undergraduate programme. Student feedback over the years suggests that a reconfigured geography major will appeal to students wishing to exit academia after a first degree. The revised programme will offer broad exposure to a wider range of courses and opportunities for students to tailor course combinations in geography, which are better aligned to their chosen career path.

The Department continued the implementation of its new Major in Applied Geography with the successful completion of two new courses: Natural Hazards & Society (GGEO2234) and Research Design & Management

Course (GEOG2333). Natural Hazards & Society introduced students to natural and anthropogenic hazards drawing upon key principles of geomorphology, climatology, plate tectonics, oceanography and geophysics. Research Design & Management focused on the managerial aspects of research and will expose students to contemporary tools and skills needed to enhance their strategic research capacity. Based on student feedback, both courses were well-received.

Student numbers

Undergraduate				Postgraduate	
<i>Geography</i>		<i>Geology</i>			
Year I	69	Year I	43	MPhil Geography	8
Year II	26	Year II	35	MPhil Geology	4
Year III	18	Year III	23	Ph.D. Geography	5
				Ph.D. Geology	3

RESEARCH AND GRADUATE ACTIVITY

The Department recorded 39 peer-reviewed publications for the academic year. This is the highest number of publications in a single year in the Department’s history. Seven graduate students led or contributed to 15 of these publications. Additionally, the Department produced 23 technical reports to various international, regional and national organizations. The Department secured US\$282,990 (JA\$43,418,934) in project funding for the 2021-2022 academic year.

The Department made significant strides towards reviving/rebranding its research units. The Department has three research units: Marine Geology Unit, Unit for Disaster Studies, Earthquake Unit. Of the three, only the Earthquake Unit is currently active. Staff consultation during the development of the strategic plan revealed four priority groups/clusters of research interest: disaster studies, geospatial research, water resources, and, coastal environments. For the 2021-2022 academic year, the department continued the process of reviving the Unit for Disaster Studies (UDS) and establishing the Geospatial Support Group (GSG). Graduate students, Mr. Aleem Mahabir and Ms. Kristinia Dougherty were Winners of the 2022 Courtney Russell Award, co-sponsored by the Association of American Geographers GISS Specialty Group and the Caribbean Geography Specialty Group. Aleem was also a recipient of the 2022 Travel Award from the Urban

Geography Specialty Group of the American Association of Geographers. Ms. Shaughna-Lee Steele was winner of the Exemplary Research category in the recent "Your Caribbean Story" competition. Organized by the United Nations initiative on Global Geospatial Information Management (UN-GGIM) Americas, Caribbean Geospatial Development Initiative (CARIGEO), and Environmental Systems Research Institute (ESRI). Mr. Mathew Rahamut was awarded the Geological Society of America Graduate Research Grant. Graduate students delivered presentations in 12 conferences and workshops for the academic year.

PUBLICATIONS

Peer-reviewed

- Mandal, A., Stephenson, T., Campbell, J., Taylor, M., Watson, S., Clarke, L., Smith, D., Darshan, J., and Wilson, M (2021): An assessment of the impact of 1.5 vs 2 and 2.5 °C global temperature increase on flooding in Jamaica: A case study from the Hope Watershed. Accepted Philosophical Transactions A. <https://doi.org/10.1098/rsta.2021-0141>
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- Eyzaguirre, J., Burrowes, R., Debortoli, N., Campbell, D., Clarke, J. & Litt, A (2021) Vulnerability & Adaptation Assessment for St Kitts & Nevis 3rd National Communication to the United Nations Framework Convention on Climate Change (UNFCCC). Ministry of Environment and Cooperatives, Basseterre, St. Kitts.
- Campbell, D. (2021). Community Engagement Survey Results & Outputs: British Virgin Islands. Community Disaster Risk Reduction Fund. Caribbean Development Bank. St. Michael, Barbados.
- Campbell, D. (2021). Community Engagement Survey Results & Outputs: Ramble and Llandewey, Jamaica. Community Disaster Risk Reduction Fund. Caribbean Development Bank. St. Michael, Barbados.
- Campbell, D. (2021). Community Engagement Survey Results & Outputs: St. Vincent and the Grenadines. Community Disaster Risk Reduction Fund. Caribbean Development Bank. St. Michael, Barbados.
- .Campbell, D. (2021). Community Engagement Survey Results & Outputs: Savanna la mar and Russia, Jamaica. Community Disaster Risk Reduction Fund. Caribbean Development Bank. St. Michael, Barbados.
- .Edwards, T. (2022). Vulnerability and Risk Assessment Report for the Coastal Sector. The Adaptation Programme and Financing Mechanism (AP&FM) Project. Risk/Vulnerability Assessments and Preparation of Climate Change Adaptation Strategies/Plans for Five Priority Sectors
- .Edwards, T. (2022). Climate Change Adaptation Plan for the Coastal Sector. The Adaptation Programme and Financing Mechanism (AP&FM) Project. Risk/Vulnerability Assessments and Preparation of Climate Change Adaptation Strategies/Plans for Five Priority Sectors

ALIGNMENT

PAPERS PRESENTED

- Dr. Sherene James-Williamson presented at a sensitization workshop for the Cultural Sector Resilience Project "The impact of natural disasters on the natural heritage and Geoheritage in Jamaica" September 16, 2021.
- Dr. Sherene James-Williamson moderated and co-presented and moderated a panel at the Museums Association of the Caribbean Virtual Conference. Panel title "The role of geodiversity and heritage in building awareness and resilience in the Caribbean. November 3-5, 2021. Co-presenters: Dr. Katherine Ellins, Miss Jorjan Dolphy and Miss Stephanie Parker.
- Dr. Sherene James-Williamson presented at the UNESCO IGCP 692-718 webinar on January 31, 2022 on the topic "Small Island Developing States – the potential for developing UNESCO Global Geoparks a report for UNESCO International Geosciences and Geoparks Programme.
- Dr. Sherene James-Williamson presented at the UNESCO Webinar on Opportunities, Challenges, and Emerging Initiatives in the Caribbean and AIS SIDS. The focus of her presentation was on Global Geoparks in Small Island Developing States. January 31, 2022
- Dr. Sherene James-Williamson participated in a special 2-day conference entitled Conference of the Islands (hybrid meeting) held February 9-10, 2022, hosted via zoom and in Barbados by the Caribbean Heritage Forum under the auspices of the British High Commission in Barbados and the kind patronage of the Governor General of Antigua and Barbuda Sir Rodney Williams and his wife Lady Williams.
- Dr. Sherene James-Williamson presented at the Geodiversity Workshop - Celebrating International Geodiversity Day, hosted by the Association of Geoconservation, Hong Kong on May 26, 2022. The Workshop was entitled "Geodiversity in Latin America and the Caribbean". The presentation was "Caribbean Geodiversity"
- Dr. Sherene James-Williamson participated in the Oxford Geodiversity Virtual Conference hosted online by the Oxford University Museum, United Kingdom June 6-9, 2022. The abstract entitled "Geoheritage and Geodiversity as a tool for conservation in Jamaica" Jorjan Dolphy was the presenter.
- Dr. Thera Edwards presented a paper, Assessing the Potential for Creat-

ing a Water Fund for the Kingston Metropolitan Area at the 2021 International Conference on Environment and Society Watershed Processes in the Face of Dynamic Landscapes and Climate Change held virtually November 22-23, 2021. <https://eas-conference.fiu.edu/wp-content/uploads/2021/10/T42.pdf>

- .Thera Edwards participated in the REDD+ Mapathon hosted by the Forestry Department and University of Edinburgh on November 18 & 19, 2021. The sessions provided training in use of Collect Earth and Google Earth for land use verification.
- Dr. Thera Edwards participated in a training focused on Applications of Geospatial Technologies and Data in Disaster Risk Management hosted by ECLAC in collaboration with the CCRIF SPC. regional workshop aimed at providing policymakers and technology users on the advances in geospatial technologies and their applications for DRM in the Caribbean. August 30 to September 8, 2021.
- Dr. Thera Edwards participated in a training on the IPBES Methodology for National Ecosystem Assessments hosted by the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC). The training sought to provide an overview of the IPBES methodology for conducting ecosystem assessments and how this can be tailored to NEAs. September 2, 2021.
- Dr. Thera Edwards participated in a panel discussion on 'Conversations around the Diocese: The Impact of Climate Change' organized by, We are the Church, December 1, 2021.
- Dr. Thera Edwards participated in a National Ecosystem Assessment capacity building workshop, organized by The Caribbean Natural Resources Institute (CANARI). December 2, 2021.
- .Dr. Thera Edwards participated in a Webinar on Comprehensive Climate and Disaster Risk Management. December 17, 2021.
- Dr. Thera Edwards - participated in a panel discussion on 'Climate Change in the Caribbean' hosted by Caribbean Links (UK). January 22, 2022.
- Dr. Rose-Ann Smith participated in the Training of Trainers Workshop on Post Disaster Needs Assessment and Recovery Framework Organized by UNDP, Disaster Risk Reduction Centre & The University of West Indies December 13-16, 2021.
- Dr. Rose-Ann Smith participated in Building Climate Change Resilience Workshop January 11-13, 2021The University of the West Indies, Mona
- Dr. Rose-Ann Smith organized two training workshops as part of the project on "Strengthening the Capacity of Women in Coffee in Jamaica

through training” in St. Thomas Penlyne Castle for the Woman in Coffee. The 15th January and 29th January on pest management and good harvesting practices.

- Dr. Rose-Ann Smith presented on the topic “Land Identity, Environmental Justice and the Indigenous People of St. Vincent and the Grenadines” at the St. Vincent and the Grenadines Country Conference 2022 History, Ancestry and Heritage- From Whence we Came, July 19-20, 2022.
- Dr Michael Burn delivered a lecture to students on the One Ocean Expedition Graduate level course SDG313 on the topic The Value of Natural Archives of Atlantic Hurricane Activity. Climate Action Field Course -The University of Bergen, October 20, 2021.
- Dr Robert Kinlocke delivered a Brown Bag Seminar presentation on the topic Planning for the Precariously Placed: An Examination of Exclusion, Governance and the Sustainability of Informal Food Retail in Kingston, Jamaica. October 14, 2021
- Prof Simon F. Mitchell presented “New rudists from central Jamaica and their significance” Thursday 28th October 2021. Brown Bag Research Seminar, Department of Geography and Geology, UWI (by Zoom).
- Prof Simon F. Mitchell presented “A simple geology of Portland, Jamaica” Wednesday 10th November 2021. Invited presentations – Joint Workshop between UWI – Alligator Head Foundation – Jackson School of Geosciences, Alligator Head Foundation Offices, Portland, Jamaica.
- Prof Simon F. Mitchell presented “Basis for a LBF zonation for the American Paleogene.” Invited Talk. Foraminifera seminar series, Micropalaeontological Society (London) / Cushman Foundation (USA), Monday 13th June 2022 (by Zoom).
- Prof Simon F. Mitchell presented “Geological mapping in Jamaica: With a geological map of the parish of Hanover as an example.” Invited Talk. Mines and Geology Division, 15th July 2022.
- Dr. Arpita Mandal presented on the topic Water Quality: A Kingston Case Study at the UWI Real Time Monitoring System for Water Quality Workshop organised by UWI CSGM and CCRIF SPC. February 9, 2022.
- Dr. Thera Edwards presented Beauty with a Purpose: The history and global significance of Cinchona Botanical Gardens, Jamaica at the SEB-ISE Conference ‘Out of Many, One People Biocultural Diversity Across Borders’ May 29-June 2, 2022, Kingston Jamaica. The paper was co-authored with L. Denzil Phillips
- Dr Thera Edwards delivered an invited talk, Every flower must grow through dirt: The Making of Jamaica’s Botanical Gardens to The Com-

monwealth Heritage Forum on May18, 2022. https://youtu.be/Z8c_ip-4hBaE

- Dr. Thera Edwards participated in the State of the Jamaican Climate 2020 – Stakeholder Consultation Workshop as the Coastal Sector and Human Settlements Lead on June 23, 2022
- Dr. Thera Edwards presented on Engaging Youth in Agrifood Heritage and Climate Resilience at a COP 26 Side Event held at the Salvation Army Church and Community Centre via Zoom on November 1, 2021
- Dr. Thera Edwards served as a Member of the Local Organising Committee for Association of Caribbean Historians Conference hosted by the Dept. of History and Archaeology June 5-8, 2022.
- Dr Thera Edwards served as a Program Committee Member for the 2023 Berkshire Conference of Women, Genders and Sexualities. Theme - Oceans, Islands, and Continents: Reconceptualizing the Spatialization of Women's, Gender and Sexuality Histories. Sub-theme - Decolonizing the Environment and the Post-Human
- Dr Thera Edwards was a Panelist on the Informational Webinar Session for Reimagining Nanny: Her Sword – A Seed on October 30th, 2021. Available at <https://www.youtube.com/watch?v=JtUBi7qIJzs&t=3s>
- Dr Thera Edwards delivered an invited talk on Mountains to Grade 6 students at Half Way Tree Primary via Google Meet on December 15, 2021.
- Dr. Thomas Stemann attended the Geological Society of America Annual General Meeting in Portland, Oregon 9 Oct. - 15 Oct. 2021 and presented two posters. One dealing with his own research on Cretaceous corals titled "Corals on soft substrates in the Campanian of Jamaica" and another detailing research headed by post-graduate student Mr Matthew Rahamut titled " Taphonomic and bio-facies characterization of Late Pleistocene emergent reef deposits in Treasure Beach, Jamaica."

PUBLIC SERVICE

Dr. Shaneica Lester

- Board Member - The Water Resources Authority
- Member - The Land Development and Utilization Commission
- Prof. Simon F. Mitchell
- Scientific Committee, International Congress on Rudist Bivalves.
- Scientific Committee, Caribbean Geological Conference.
- Editor, UWI Contributions to Geology.

- Language Editor, Carnets de Geology.
- Chairman, Jamaican Stratigraphic Committee.

Dr. Sherene James-Williamson

- Editor – Caribbean Journal of Earth Science
- Editor – Caribbean Museums
- Member – Science Advisory Committee of the Jamaican National Commission for UNESCO
- Member – ACP-EU Development Minerals Programme Country Working Group
- Member – Declarations Committee, Jamaica National Heritage Trust
- Assistant Chief Invigilator - Caribbean Examinations Council
- Honorary Treasurer, Jamaican Historical Society
- Immediate Past President, Museums Association of the Caribbean
- Archaeological Society of Jamaica (Board Rep. for Jamaican Historical Society)
- Council Member, Geological Society of Jamaica

Dr. Donovan Campbell

- Associate Editor – Climate Risk Management (Journal)
- Associate Editor – Climate and Development (Journal)
- Associate Editor - International Journal of Climate Change Strategies and Management (IJCCSM)
- Review Editor - Frontiers in Climate (Journal)
- Editorial Board - Frontiers in Sustainable Food Systems (Journal)
- Co-Editor - Disasters Journal (Special Issue)
- Board Member, Land Information Council of Jamaica (LICJ)
- Board Member, Caribbean Climate Innovation Centre (CCIC)
- Board Member, Mona Social Services, The University of the West Indies
- Council Member, Integrated Water Resources Management Council (IWRMC) - Ministry of Economic Growth & Job Creation
- Chairman, of the Education & Training Committee of the Land Information Council of Jamaica (LICJ)

Dr. Thera Edwards

- 2023 Berkshire Conference of Women, Genders and Sexualities Program Committee
- 53rd Annual Conference of the Association of Caribbean Historians (ACH) Local Organising Committee.
- Geography Awareness Week Planning Committee

- Contributing Expert, World Justice Project (WJP) and the Inter-American Development Bank (IDB Environmental Governance in Latin America study)
- Mentor, UWI Mona Guild Intergenerational Women's Mentorship Programme
- Associate Evangelist, Diocese of Jamaica and The Cayman Islands (UWI Chapel)
- Chairman, Board of Directors - Caribbean Coastal Area Management Foundation

Mr. Kevin Tankoo

- AAPG Latin America & Caribbean Region Chapter undergraduate mentor and project advisor.

Dr. Mike Burn

- Editorial Board Member for the peer-reviewed journal Scientific Reports, for Springer Nature.
- Dr. Arpita Mandal
- Member of the Technical Committee of Global Water Partnership Caribbean (GWP-C)
- Dr. Taneisha Edwards
- President, Geological Society of Jamaica
- Dr. Thomas Stemann
- Vice President, Geological Society of Jamaica

OUTREACH, VISIBILITY & LINKAGES

The Department led and contributed to several international, regional, and national events. The Department launched a new website for the Earthquake Unit. Brown Bag Seminars delivered by staff members and graduate students.