

Ana Samperiz Vizcaino

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Education

Cardiff University, Cardiff (United Kingdom)

PhD in Earth Sciences

October 2018 – Present

Thesis title: *From watersheds to reef: reconstructing the history of land use change and coral reef health in Fiji.*

Experience highlights:

- Processing of computerised tomography (CT) images for coral growth quantification.
- LA-ICP-MS trace metals analyses of coral skeletal material to explore environmental impacts.
- Work closely with international collaborators (WCS, USP Fiji, Government of Fiji).
- Outreach and science communication: Volunteering at “Pint of Science 2019”. Implementation of a workshop on the topic “tropical reefs and corals as archives” aimed at both Primary and Secondary schools.

Funded by: NERC GW+4 DTP + CASE Partner Wildlife Conservation Society Fiji.

University of Bristol, Bristol (United Kingdom)

MSci by Research in Earth Sciences

September 2016 – August 2018 (Part time)

Thesis title: *Stylasterid corals: A new paleoceanographic archive?*

Experience highlights:

- Identification of stylasterid corals up to species level based on the skeletal morphology of the specimens.
- Sample selection and preparation for skeletal $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ analyses.
- Mineralogical analyses (XRD) and SEM imaging to determine biomineralisation patterns.
- Five-week marine research expedition onboard the RSS *Discovery* to the Labrador Sea.
- Outreach and science communication: execution of geology workshops aimed towards Primary Schools.

University of Zaragoza, Huesca (Spain)

BSc Environmental Sciences, 1st class.

September 2009 – December 2014

Fourth year project title: *Design, implementation, and evaluation of an Environmental Education Program in a summer camp.*

Experience highlights:

- Design of environmental education activities and obtention of data (quantitative and qualitative) to investigate their impact on participant’s knowledge and behaviour towards the environment.

Relevant employment

University of Bristol, Bristol (United Kingdom)

Research analyst in marine geochemistry

October 2016 – August 2018 (Part-time)

Responsibilities:

- Physical and chemical cleaning of marine samples and preparation for AMS and MC-ICP-MS analyses.
- Curation of marine samples and maintenance of the coral database.
- Interaction with international collaborators and training visitors to the lab.

Sustainability Office. University of Zaragoza, Zaragoza (Spain)

Environmental Education officer

January 2013 – January 2015

Responsibilities:

- Design of environmental awareness campaigns directed to the university community, design and implementation of training courses about good environmental practices, events and conferences organization, web page and social media management.

Lab skills

- Data acquisition through computerised tomography (CT) and processing of CT images.
- Laser Ablation (LA) – 193nm excimer laser.
- Analysis of trace elements in biogenic carbonates with LA - ICPMS and data processing.
- Stable isotope ($\delta^{13}\text{C}$ and $\delta^{18}\text{O}$) analysis in marine carbonates.
- Stylasterid and scleractinian corals morphological identification up to species level.
- Experience in chemistry clean laboratory.
- Environmental data acquisition through remote sensing (satellite data level 2 and level 3).

Technical skills

- R: For tidying data, statistical analysis, data visualization and spatial analysis. Reproducible research and version control on R Markdown + GIT.
- ArcGIS and QGIS: Analysis of spatial data and data visualization.
- Corel, Inkscape + GIMP: For graphical enhancement of data visualization.
- Ocean Data View (ODV): For data visualization.

Publications

- Li, T., Robinson, L., Chen, T., Wang, X., Burke, A., Rae, J., Pegrum-Haram, A., Knowles, T., Li, G., Chen, J., Ng, H.C., Prokopenko, M., Rowland, G., **Samperiz, A.**, Stewart, J., Southon, J., Spooner, P. 2020. Rapid shifts in circulation and biogeochemistry of the Southern Ocean during deglacial carbon cycle events. *Science Advances*, 6:42. doi:10.1126/sciadv.abb3807
- **Samperiz, A.**, Robinson, L., Stewart, J., Strawson, I., Leng, M., Rosenheim, B., Ciscato, E., Hendry, K., Santodomingo, N. 2020. Stylasterid corals: a new paleotemperature archive. *Earth and Planetary Science Letters*, 545:116407. doi:10.1016/j.epsl.2020.116407

- Stewart, J., Robinson, L., Day, R., Strawson, I., Burke, A., Rae, J., Spooner, P., **Samperiz, A.**, Etnoyer, P., Williams, B., Paytan, A., Leng, M., Häussermann, V., Wickes, L., Bratt, R., Pryer, H. 2020. Refining trace metal temperature proxies in cold-water scleractinian and stlyasterid corals. *Earth and Planetary Science Letters*, 545:116412. doi:10.1016/j.epsl.2020.116412
- Hendry, K., Huvenne, V., Robinson, L., Annett, A., Badger, M., Jacobel, A. Ng, HC., Opher, J., Pickering, R., Taylor, M., Bates, S., Cooper, A., Cushman, G., Goodwin, C., Hoy, S., Rowland, G., **Samperiz, A.**, Williams, J., Achterberg, E., Arrowsmith, C., Brearley, A., Henley, S., Krause, J., Leng, M., Li, T., McManus, J., Meredith, M., Perkins, R., Woodward, M. 2018. The biogeochemical impact of glacial meltwater from Southwest Greenland. *Progress in Oceanography*, 176:102126. doi:10.1016/j.pocean.2019.102126
- **Samperiz, A.** & Herrero, J. 2018. Evaluation of a summer camp environmental education program in Spain. *Applied Environmental Education & Communication*, 17(1), 79-90. doi:10.1080/1533015X.2017.1366881

Teaching experience – Cardiff University

- **Student supervision:**
 - Mr Jacob Lloyd Newman: MSci research dissertation “Potential drivers of bioerosion in massive *Porites* on an inshore reef in Fiji”.
- **Teaching assistant during practical sessions in undergraduate modules:**
 - Marine Environmental Systems (Year 2021-2022)
 - Coral Reefs (Year 2020-2021)
 - Biogeochemistry (Years 2019-2020, 2020-2021)
 - Earth surface processes (Year 2018-2019)

Invited talks

- Sclerochronology group, University of Exeter – April 2021
“Small but mighty: The potential of stlyasterid corals as paleoceanographic archives”
- ECR symposium, International Fossil Coral and Reef Society (IFCRS) – October 2021
“Small but mighty: The potential of stlyasterid corals as paleoceanographic archives”

Awards and Grants

- **Hazel Prichard Impact Prize**, School of Earth and Ocean Sciences, Cardiff University (2019). £500 to support the implementation of the outreach activity “REEFsistence”.
- **Alumni Foundation Award**, University of Bristol (2017). £1,000 to support the outreach program “Rock Wow Days”.
- **Best 4th Year Project Award**, Polytechnic School, University of Zaragoza (2015).

Conference organization

- Geochemistry Group Research in Progress (GGRiP) – May 2022.
- EARTH 3-minute talks, seminar series – June to December 2021.