

## 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

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

### Conference talks

#### Invited talks

- Sclerochronology group, University of Exeter – 2020
- IFCRS - 2020

### 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”.
- **4<sup>th</sup> Year Project Award**, Polytechnic School, University of Zaragoza (2015). Award given to the 5 best last year projects in Environmental Sciences.

### Conference organization

- GGRIP
- 3-minute talks