

## Dan James - Earth Sciences field trip, Gulf of Aqaba, Red Sea off Eilat, Israel

At the end of the summer I travelled to Israel with my project supervisors Dr Harold Bradbury, Dr Zvika Steiner Dr Gilad Antler, and PhD student Alec Hutchings. We spent a week in the field, of which one day was spent collecting samples of sea floor sediment from the base of the Red Sea, and a further two days were spent in the lab (at the Inter University Institute for Marine Sciences in Eilat) processing the sediment cores and preparing the samples for transport back to Cambridge for analysis. The trip also provided an opportunity to experience the culture and history of the Israel/Palestine region, including day trips to Jerusalem and Tel-Aviv.

We used two methods for core collecting, one of which (gravity coring) had not been attempted before in this region. We fortuitously had a 100% success rate on core collection, which allowed us to spend more time in the lab to thoroughly process the samples. This formed my first experience of both in situ marine sample collection, and work in a sedimentary laboratory, both of which will be invaluable skills as I continue to pursue research in biogeochemistry.

Since the field work, the samples have been analysed for calcium isotope systematics and I have constrained the dynamics of active carbonate precipitation in these sediments; a novel finding for this region and significantly changing our understanding of local sedimentary geochemistry. The data is believed by the research group to be of publishable quality, something I hope to continue working on into 2019.

The visit was highly enjoyable and educational, not only the engaging science but also the cultural aspect. Firstly, the religious history experienced in Jerusalem - specifically how close the major Holy Sites for all three Abrahamic religions are - which is not something I found appreciable beforehand, and how this lends itself to the inevitability of conflict in the region. Also, the clear East/West divide in Jerusalem as a whole; which was obvious and led to interesting discussion with both Israeli and Palestinian locals, opening my eyes to new viewpoints and opinions on the increasingly important issue.

Special thanks to Dr Gilad Antler, without whom the project would not have been possible, for his funding, hospitality, scientific ideas, and use of his lab and field equipment.

