Scott Engering visits

El Museo Geominero Madrid and nearby places

As a geologist and a photographer, I have spent a good part of my life looking at rocky landscapes and old stone buildings. Whenever I go to somewhere new, you can be sure that I will be visiting such places. My recent trip to Madrid was no exception. Although not planned this way, it turned out to be quite a geological holiday.

A bus journey from the south-eastern suburbs to the city, along the motorway, introduces you to the local geology. I only saw glimpses as the bus sped by but it was enough to see a dissected landscape of gently folded Quaternary sediments -coarse gravels, sandstones and mudstones – that have been further exposed by the extensive road cuttings and the other developments that are taking place.

As you approach Madrid the skyline is dominated by massive apartment blocks and you don't really get the opportunity to appreciate the geographical setting of the city. Alighting at Atocha railway station, you soon realise that granite is used everywhere in Madrid; brought in mainly from the Sierra Guadarrama to the north, its uniform pale grey and pink tones are interrupted only by the occasional darker xenolith.

The principal historic monuments are built of granite, in a plain classical style. They look monumental and functional, rather than stylish, and my first impression of Madrid was that the architecture wasn't very elaborate. I saw many exceptions, especially in the details but, overall, I suspect that the intractable nature of granite has limited Madrid's expression of creativity through its architecture.

One place that I did really want to see for the architecture, as much as anything else, was the Museo Geominero, set in the heart of the Instituto Geológico y Minero de España (IGME).

Growing up in London as a child, frequent trips to the Geology Museum on Exhibition Road fuelled my passion for geology; I remember being fascinated by row upon row of rocks, fossils and minerals, set out in old fashioned glass cabinets. The modern trend of museums to replace actual specimens with interactive displays has never really impressed me and, at the Museo Geominero, I felt in my element.

It comprises a main floor, above which rise three levels of balconied galleries, topped with a spectacular stained glass roof. There are over 5600 minerals and 10,000 fossils on display, together with a relatively small collection of rocks. Simply presented in over 250 cabinets, the collection comprises specimens from all over Spain, as well as those from the former Spanish colonies.

Borehole Log in Stained Glass

Mastodon

To get the very best out of your visit, ask at the reception desk for both a Spanish and English version of the museum guide, to familiarise yourself with the classification and organisation of the collections. I just wandered around randomly, going up one spiral staircase after another, as far as I was allowed to go, taking nearly 200 photographs. I could have stayed hours.

The real highlight for me was the stained glass borehole logs that you first see when you enter the museum. Recording the exploration for potassium salts in Catalonia, the strata are faithfully reproduced to scale. Marl, limestone, sandstone, marl slate, salt, carnalite and silvinite are all represented.

Main Gallery Space

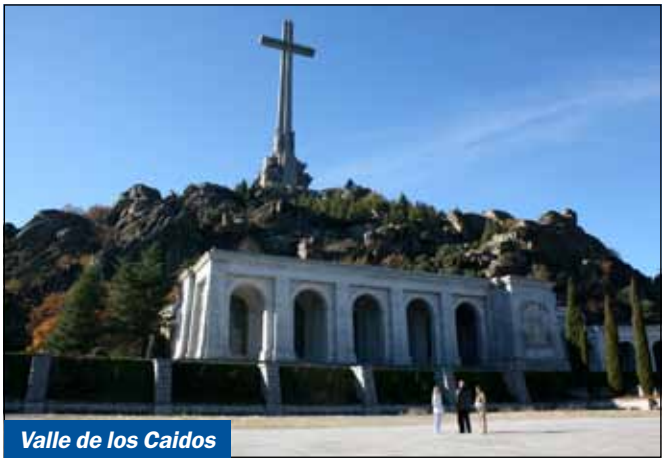
Away From Madrid

Journeying not too far from Madrid

Display Cabinets

Goethite

Rose Quartz



Valle de los Caidos

enables you to see some of Spain's most spectacular historic monuments. Just two are mentioned here.

On the Sierra de Guadarrama it's hard to miss the 150m high cross that marks the site of El Valle de los Caídos (Valley of the Fallen); set on an isolated spur of granite at a height of over 900m, it is visible from over 30km away. Built between 1940 and 1958 under the orders of General Franco, to commemorate the casualties of the Spanish Civil War, it is also his burial place. The associations with Fascism are still highly controversial here, but there is no doubt that this is one of the most impressive structures that I have seen.

The first thought that came to mind when inside the Basilica, a great tunnel-like structure excavated into the granite, was that it was like an underground St. Paul's Cathedral. It is an astonishing work of structural engineering but, unfortunately, no photographs were allowed.

We arrived too late to ascend to the cross or take a really good look around, but the panoramic views of the surrounding mountains and forests were stunning and, for a photographer, the quality of light was exceptional. Nearby is El Escorial, a royal palace completed in 1584 and a stunning World Heritage Site.

The second place to mention is Segovia, north of Madrid and just 30 minutes in a high speed train. I was simply astounded by the first thing that I saw – a Roman aqueduct. Segovia is another World Heritage Site and deserves a day's visit on its own. I only had an hour to take a few photographs and sample a chocolate speciality, but it was enough time to marvel at yet another magnificent granite structure – this time built without the use of mortar.

Back in Madrid with local friends the conversation turned to the geotechnical problems of laying stable foundations for the multi-storey apartment blocks in Madrid and the problems of tunnelling – mainly for the underlying gypsum. How this was quite achieved with my limited knowledge of Spanish, and my host's lesser knowledge of English, is quite another matter, but it shows that you can overcome any obstacle of language when you share a common passion for rocks.

Spain possesses a very rich geological heritage and an equally proud mining industry that has been active since well before the Romans arrived. I highly recommend that you go and take a look for yourself.

El Escorial

Roman Aqueduct in Segovia