

## Science in the Citadel

Colleen Bower\*

On a sunny Saturday afternoon, the 22<sup>nd</sup> of April, *Science in the Citadel* was held in Gozo's iconic medieval Citadel. It provided an atmospheric venue for the first science festival on the island. The festival was sponsored by Eco-Gozo, and inaugurated by Minister of Gozo, Dr Anton Refalo. The aim of the festival was to engage the public with science, to inspire the next generation towards scientific endeavour and to showcase Gozo as a potential future hub for scientific discussion and development.



**Figure 1:** The citadel located in Victoria (Rabat), Gozo.

As a historical venue, the Citadel presented a number of logistical challenges. The organisers were clear from the outset that, if you want to engage local people, the Citadel was the place to start. The centre of the island since before medieval days, the citadel provided a secure refuge against attack. It could not have done so were it not for the foresight and growing specialisation of the military scientists and engineers of the day. The latest

in thinking regarding construction, food and water storage and defence were all incorporated into its structure. Moreover, the first Hospital on Gozo was built within its walls. Advancements were made in disease control, medicine and pharmacy, with the influx of physicians, surgeons and apothecaries under the rule of the Knights of St John, the Hospitaller Order.

Hence the Citadel and its internal structures provide tangible testimony to the fact that scientific inquiry was as relevant to the lives of the people of the past as it is today. It also presented a concrete symbol of the continuity of scientific endeavour though the centuries; the truth that, to paraphrase Newton, today's scientists might see further ahead, but only because they can stand on the shoulders of giants. And its physical situation allowed us to truly situate the various strands of science presented in what was known and perceptible to the visitors.

A walk around the Citadel reveals an archaeology museum, perfect as a venue for discussing the chemical transformations involved in turning clay into pottery; a nature museum, its exhibits the backdrop to talks about the relevance of geology to everyday life and the science attached to the flora, birds and bees of the island; an Old Prison, the context for forensic science demonstrations and an Old Hospital, the cue for biomedical and anatomical research displays and talks. The imposing bastions offer panoramic views of the skies, seas and layout of the island, inviting further investigation and interest in astrophysics with telescopes, geoscience with seismology stories and marine sciences offering results of underwater explorations. Thus the subject matter of the festival was truly embedded in its situation.

Furthermore, the festival offered tiered engagement opportunities. Whilst adults and the already science-savvy could take in a talk, meet the researcher or debate with peers in a Café Scientifique style discussion, children from kindergarten upwards were the target audi-

\*Correspondence to: Colleen Bower (colleenbower@btinternet.com)

ence of a range of theatrical science demonstrations, busking and shows provided by Esplora and Kids Dig Science in the equally theatrical surroundings of the Ditch (moat), and workshops in some of the arched internal spaces. The schools on the island took part in a challenge to use the Citadel as inspiration for a piece of scientific investigation with the wide-ranging results on topics from the physics of sound, inspired by the ancient bells to camouflage in nature. It is estimated that over 3000 visitors attended the festival. The results of the exit survey and the anecdotal evidence suggest that the participants were highly engaged.



**Figure 2:** Adults and children bubbling with enthusiasm for science.

*Science in the Citadel* was organised by Colleen Bower, coordinator of Café Scientifique in Gozo and a small team of volunteers in association with Esplora, the Malta Chamber of Scientists and EcoGozo. Contributions to the event included personnel from several departments of the University of Malta, researchers from Malta College for Science & Technology (MCST) and Malta Life Sciences Park projects, and special interest organisations such as BirdLife Malta, SharkLab and the National Aquarium.



**Figure 3:** Young scientists experimenting with bubbles and the phenomena of surface tension.