ESEB Outreach Fund Report

Project: Darwin at the Museum **Applicants:** Jennah Dharamshi, Eleanor Heyworth, Daniel Tamarit **Affiliation:** Uppsala University **Project website:** https://darwinatmuseum.wordpress.com

Description of "Love evolution: Darwin at the museum".

In 2017, the European Society for Evolutionary Biology (ESEB) awarded an Outreach Fund to a team from Uppsala University, with the goal of designing and implementing a highly interactive evolution-themed event at the Naturhistoriska Riksmuseet (Natural History Museum, NRM) in Stockholm over Darwin Day weekend (February 10-11, 2018). The final event involved 60 volunteer young researchers (PhD Students, Postdocs and other researchers) from five different departments at Uppsala University, united by the common thread of evolutionary research.

The scientists involved were active researchers spanning the fields of medical, ecological, microbial, genomic and molecular evolution. The NRM outreach and education department were enthusiastic and invaluable partners in planning the event, and helped the organising team and volunteers design a coherent, accessible and engaging weekend.

The activity was called 'Love Evolution – Darwin at the Museum' and involved an evolutionary 'treasure hunt' through the museum. Guests were given a map of the museum, labelling the locations of ten evolution-themed stations. At each station was a team of Uppsala University researchers with an interactive game or activity aimed at 7 to 12-year old children and their families. Themes of the stations revolved around the volunteers' own research, with the aim to showcase contemporary evolutionary research to the public in an accessible way, and to facilitate conversations between researchers and visitors. Nine stations focused on diverse research topics, and one explored 'Misconceptions in Evolution' and aimed to answer questions and start discussions around the topic.

Once each activity was complete, participants were awarded a stamp and continued on their hunt around the museum. Collecting 5 stamps won the participant a Darwin-themed pin and bookmark, and many filled out the feedback questions on the maps upon completion and entered their details into a prize draw for a larger evolution-themed prize. Activity descriptions are to be found on our website (see report heading), but some examples included a walk-like-a-dinosaur activity, illustrating how fossilized footprints can help scientists find out how extinct animals moved, and a Darwin's finches station, where participants used different tools to pick up different types of food, and explored how this could lead to speciation.

The activity was advertised on the NRM website and Facebook pages, and the volunteer researchers helped spreading the word on Twitter, Uppsala University e-mail lists, and other University media. Moreover, four Swedish-speaking researchers at Uppsala were recorded

in short videos aimed at social media explaining key evolutionary concepts, which were shared by the museum and posted on a Darwin Day Youtube channel. Two volunteers made a website (https://darwinatmuseum.wordpress.com), which contains activity descriptions, photographs from the event and information, as well as copies of the videos. We hope that this will now act as a resource and that the basic premise of the activity could be replicated in other museums in future. Three volunteers also acted as photographers during the event, allowing us to generate a gallery of the event, which is also published in the website.

Experience, results and feedback

The museum received over 4000 visitors over the two-day event, with many visitors saying they had visited specifically to join the event. The majority of the visitors were families with children aged 7 to 12, but younger children, teenagers and adults also enjoyed the activity. Around a thousand maps were given to the visitors, and over a hundred of them were returned at the end of the activity, most of which included stamps showing that more than the required half of the stations had been completed.

We received on-the-day feedback from the museum, which was overwhelmingly positive, and written feedback from participants, which included their favourite station, favourite part of the activity and what they would like to be improved. Participants wrote their feedback at the very end, so we could witness the enthusiasm of the children while they filled the short form, many of them shouting to their parents that their favourite thing was 'everything', or that they had had so much fun. The written feedback was in Swedish, but the included remarks on their favourite part of the event (translated to English) included the 'very fun/interesting activities', the 'great researchers' and many remarked that they learnt a lot, with several saying they plan to explore some of the topics further, themselves. Most of the participants chose a specific station as their favourite thing about the event, and, to our surprise, all stations were chosen at least 5 times. As to what could be improved for a potential second edition of the event, few participants provided feedback, but the most common themes included the possibility to include more Swedish speakers, and bringing more researchers and activity space, due to the large crowd that had attended during peak hours.

We also asked the volunteers about the experience, which they felt was highly rewarding. Their responses included:

'I really loved the experience of interacting with the public. I loved meeting the Science Communicators at the museum (sounds like a fantastic job!). I liked a lot all the positive energy from everybody. In general I thought it was an incredible opportunity and experience!'

'I think it is always good to formulate in easy ways what you are working with. Also it is good to interact with the public'. 'It was a larger event than most I'm used to, and with an excellent planning. I learnt a lot about how to plan an event and how to interact with the museum staff.'

'It boosted my confidence! I was quite nervous that I wouldn't manage to many any sense of convey the message to people in a good way, but it went really well.'

Of the received grant, we used funds to fund a fraction of the travel for the volunteers for Uppsala to Stockholm, some of the prizes for the participants and materials for the activity in general (of which we have kept the non-consumables to potentially use in future events). Through negotiations with the museum they provided the printed maps, posters for each stand, some of the activity prizes, while we provided a Darwin costume to greet visitors with. We attach receipts showing expenditures.

We would like to thank ESEB for the generous grant that allowed this activity to take place, and are very happy that it was a success – both for us, the 60+ volunteers and the visitors who participated. We hope that this template of activity can be replicated in other museums to enable researchers to talk about their research with the public in an accessible manner. Both our volunteers and the organising team learnt a lot about communication, both with the public and with the museum partners throughout the experience. We are more than happy to be put in contact with future researchers who would like more information about how the outreach event was put together and would like to implement their own in future.

See some pictures at: https://darwinatmuseum.wordpress.com/gallery/