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Darwin200 - beyond the bicentenary

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Abstract

The Horniman Museum used the bicentenary of Charles Darwin's birth to provide a focus for improving our communication with the public about biological sciences. The Darwin200 initiative provided support that facilitated our development of partnerships with the Grant Museum of Zoology, the Society of Biology (formerly the Institute of Biology), and £30K funding from the Wellcome Trust enabled us to offer an unusually diverse range of events, exhibitions and activities that relied on considerable collaborative working within the organisation and between partners.

The approach taken to the project was to integrate the majority of Darwin bicentenary activities into the normal Horniman Learning and Exhibitions offer (such as schools resources, music concerts, evening lectures and tours), but also to trial new developments (such as a medicinal garden and photographic competition) to help inform future decisions about programming and resources.

Valuable lessons were learned from this experience, ranging from the practical (such as how well do textpanels last outdoors) to the somewhat ethereal (such as identifying where weaknesses arise in chains of communication and responsibility when working in an inter- and intra-organisational collaborative framework). The outcomes have been very positive in developing partnerships and collaborations; improving the science offer to the Horniman's audience; raising the profile of project partners through the success of the photographic competition (which received excellent coverage from the national press), and raising awareness of Darwin's life and his contribution to science.

Introduction

The Horniman Museum and Gardens were given to the people of London in 1901 by Frederick John Horniman MP. They were dedicated to the public forever as 'a Free Museum for their Recreation, Instruction and Enjoyment'. The aim of the Horniman is 'to use its worldwide collections and the Gardens to encourage a wider appreciation of the World, its peoples and their cultures, and its environments'.

The Horniman houses collections of Natural History, Anthropology and Musical Instruments; we have an excellent Aquarium that is engaged in active research and our exhibitions building is set in 16.5 acres of Gardens which contain a conservatory, animal enclosure, nature trail, bandstand and a variety of themed planting areas. The Horniman also maintains an active temporary exhibitions programme, with one space suitable for large-scale temporary exhibitions and several smaller spaces suitable for wall-mounted art and photographic exhibitions. We at the Horniman serve an expanding and diverse audience, attracting 600,000 visits in 2008 of which 72% were families with children and 31% were from Black and minority ethnic groups. In the same year our Learning team ran sessions for 27,000 schools visitors.

The bicentenary of Charles Darwin's birth and the 150th anniversary of the publication of his theory of Natural Selection (Darwin, 1859) provided a strong national focus on natural history in 2009. Many museums and universities seized this opportunity to develop new (or tailor existing) public engagement activities and exhibitions to fit a Darwin theme. At the Horniman there was already an organisational initiative to improve the natural science offer to our audiences under the guise of the Evolution 2010 project, which focused on developing and linking the physical spaces of the Horniman's Aquarium, Natural History Gallery and Gardens. During 2009 it was expected that the Natural History Gallery space would be unable to be used due to redevelopments as part of Evolution 2010, so any Darwin related exhibitions, events and activities would need to occur in alternative spaces. Rather than seeing this as a disadvantage we seized upon the idea of offering resources, exhibitions, events and activities that would work with the alternative spaces available, whilst retaining a Darwin theme. This seemed to offer an excellent opportunity to engage with sections of our audience whose interests lay outside natural history and it provided scope for seeking collaborations with other departments within the Horniman as well as with external partners.

In order to ensure that our programme of events did not clash or unnecessarily overlap with those of other organisations, we attended the Darwin200 meetings coordinated by the Natural History Museum's (NHM) Innovation and Special Projects team. This provided a very useful point of contact, which not only informed us about what other organisations were doing and when they were planning to do it, but it served as a networking hub through which we were put in touch with individuals and organisations with whom we could work. Darwin200 also disseminated information about potential sources of funding, one of which was the Wellcome Trust's People Award, to which we successfully applied for a grant of £30k to supplement £41,875 of in-kind organisational support. This grant introduced some reassessment of our originally envisaged programme, providing scope to build-in some investigative work for planned future projects involving interpretation in the Horniman Gardens as part of Evolution 2010.

Darwin: Exploration and Investigation

Charles Darwin's career was founded on his childhood fascination with the plants and animals on his own doorstep; this fascination took him around the world and led to an understanding of life that shaped the modern world. It was Darwin's spirit of exploration and investigation that we aimed to celebrate at the Horniman, in the hope that it might inspire the same spirit in some of our visitors. We were also keen to ensure that the short term focus of the Darwin bicentenary yielded a longer term legacy for the development of the natural science offer at the Horniman.

In order to meet these aims we developed resources and programmed a range of exhibitions, events and activities intended to not only provide a broader context about Darwin as a person, but also how his ideas have shaped modern scientific understanding of the diversity of life and the adaptations seen in nature. In total, 25 different events were organised, some of which were repeated in up to 18 separate sessions. Key elements of the project worthy of discussion in the limited space available here are those providing a novel institutional approach, those involving significant collaborative working and/or those giving rise to legacy outcomes.

Photographic competition

The idea of organising a photographic competition originally arose from discussion with staff from the Grant Museum of Zoology (GMZ) at the 2008 Natural Science Collections Association (NatSCA) conference, whilst in a pub - the venue is noted in an effort to redress a widespread lack of wider organisational appreciation of how ideas are often formulated by *ad hoc* networking in an informal setting.

The premise was that photography has become widespread and cameras of some sort are accessible to most people. Good natural history photography requires an investigative and explorative approach to finding and framing a suitably interesting subject which could be applied in rural, urban or museum contexts equally well. Additionally, the outcomes of a photographic competition would hopefully be suitable for exhibition and institutional/public legacy usage.

The Institute of Biology (now Society of Biology and hereafter referred to as SoB) was planning to host their own photographic competition, and were put in contact with the Horniman and GMZ by the Darwin200 coordinators at the NHM. Rather than run two similar competitions it seemed sensible to pool resources and run a single competition in collaboration. This provided additional support for publicising the competition and finding prizes; opened up new audiences to all partners; provided valuable insights, suggestions and expertise.

The competition ran from 12th February to 11th October 2009 under the theme and title of "*Exploring and Investigating Nature*". Entries were invited from four categories: Junior young person (7-11); Senior young person (12-18); University/Higher Education student (no age limit), and Adults (19+). Photographs were accepted from any non-professional photographer based in the UK (although image location was not restricted to the UK), on the understanding that the images could be freely used by the partners involved in the competition. The remit of the competition was intentionally broad, to encourage diversity of entries and flexibility in the brief interpretation required from entrants. Images could be sent as hard copy to the Horniman (where they were scanned) or uploaded electronically onto a competition microsite, with restrictions on minimum image size of 1MB to ensure high enough resolution images to be suitable for exhibition and a restriction on maximum image size of 3MB to prevent overloading the microsite bandwidth and storage space (maximum resolution images were requested from the winners for the best possible reproduction). The competition rules can be found online¹. Judging was carried out by judges with a range of expertise

from biological research to professional photography.

The SoB offered £500 in prize money, promoted the competition on their website and via their journal *Biologist* and they provided Prof. Dianne Newell OBE as a judge. The GMZ hosted the main competition microsite and image uploading facility via their parent organisation University College London (UCL), they assisted with promotion, ran photography events and provided Prof. Steve Jones and Randall Keynes OBE as judges. The Horniman coordinated, administered and promoted the competition, ran photography events, organised the prize-giving, produced an exhibition of the winning entrants and provided Kate Humble, Emma Carter and Heini Schneebeli as judges. The Wellcome Trust grant supported the promotion of the competition and a prize-giving reception and provided Dr. Daniel Glaser as a judge.

The competition yielded 217 entries, the vast majority of which were excellent. An administrative preselection process removed images taken by professionals (of which there were several) or those images that contravened the competition rules (those lacking any interpretation for example). A second pre-selection by the Darwin200 project manager and the Head of Exhibitions at the Horniman removed images that were out of focus, poorly composed or that lacked the visual impact required for use in an exhibition. The resulting long-list of 83 entries was then made available online and on CD for the judges to assess. The final decisions were made at a meeting, which most of the judges attended, taking into account the written preferences of those who were unable to attend. A shortlist was produced by discussing the relative merits of images and discarding those with least support. Each judge then applied a numerical ranking to the shortlist which allowed the winners to be quickly and fairly identified on the basis of an overall score.

The winning photographs were turned into an exhibition, the launch of which was also a prize-giving event to which the winners and highly commended entrants were invited to receive certificates, framed prints of their image and £75 vouchers for the category winners and a cash prize of £200 for the overall winner. The winning and highly commended entries were featured as slideshows on the BBC news website² and the Guardian online³ and in a booklet of the exhibition that was produced for winners, judges, project partners and other natural history organisations and which is available online⁴. The overall winner also had their image used on the cover of the Horniman's *What's on Guide* for winter 2009 and SoB *Biologist* journal, whilst all of the winners were featured in an article about the competition in the same issue (Newell, 2010).

This was the first photographic competition run by the Horniman and although it was successful in terms of outcomes, the running of the project was more challenging than had been foreseen – with many of the challenges due to the novelty of the project, which meant that effective methods of working had not yet been established. From the audience perspective there were issues raised by the image upload interface⁵, which seemed over-zealous in rejecting entries that failed to conform to quite exacting file and image sizes and formats. In retrospect it would have been preferable to allow a wider range of file formats, sizes and image resolutions to be uploaded; only preventing excessively large images to avoid systems issues. Smaller files could have been sorted after upload and unsuitably small images could have been discarded during the preparation of the long-list. From an organisational perspective, problems were caused by delays in communication between the partners overseeing the image and entrant detail uploading interface and the partners managing the administration of the entrant's details and entries for subsequent use. In hindsight these two elements could have worked through a single central database or should have been managed by one partner.

Medicinal Garden

The Medicinal Garden was intended to link the Horniman Gardens into the Darwin200 project and thereby provide an opportunity to trial outdoor signage which could inform future plans for outdoor interpretation. The Medicinal Garden was also partly an attempt to provide a medical link to strengthen the funding application to the Wellcome Trust, and to provide scope for interpretation focussing on plant adaptations and the exploitation of plant chemical defences by humans, relating this back to Darwin's long-term ill health.

Previous plantings in the Gardens had been themed, but had not relied on interpretation panels, which meant that the development of such interpretation had not been previously undertaken. The research to identify and interpret plants was carried out by a member of the Gardens team in consultation with the Chelsea Physic Garden, our Gardens Access Learning Officer, curators in the Anthropology and Natural History departments, with input from Senior Management and a member of our Trustees with expertise in the field of botany. The main interpretation was printed onto 'Vault' indestructible graphic display panels by Leach Colour⁶ and the individual plant labels were printed on card and laminated in-house.

Interpretation was also developed by a costumed interpreter who delivered sessions as Henry Bence Jones, one of Darwin's many physicians. This allowed the historical importance of medicinal botany collections to be explored, whilst providing an insight into the health problems that Darwin endured for much of his life. The interactivity of these sessions provided an excellent contrast from the drier and more factual interpretation provided using labels. Garden Explorer Backpacks facilitated another level of self-led interpretation and interaction for families (see below) and an evening event headed by Michael Holland of the Chelsea Physic Garden and Emily Dutton of the Horniman provided an adult focus. These different approaches to interpretation in the Medicinal Garden created a genuinely layered learning experience.

The Medicinal Garden attracted local media attention when it was opened by Joe Swift of Gardener's World and it proved popular with visitors throughout the summer of 2009, with reduced but continued interest shown through the winter period. Monitoring visitor numbers in this outdoor space proved difficult, but quantitative and qualitative feedback from related events, plus unsolicited feedback on comments forms (e.g. "To the Gardeners. You have done a wonderful job on the Medicinal Garden thank you for all you have done for the public" and "Medicinal plants display in gardens is **excellent** with clear (apart from 1) labels showing plant names, and also explaining the medicinal uses of plants..."), strongly suggest that the Medicinal Garden successfully engaged the Horniman's audience.

Evaluation of the Medicinal Garden informed subsequent interpretation activities in the Horniman Gardens. The Darwin's Physician tours continued in 2010 and development of the 2010 Gardens exhibition 'Allotment Life' was informed by learning from the Darwin200 experience. A practical example being that laminated card was found to require regular replacement due to water damage and rapid fading, whereas the 'Vault' indestructible graphic display panels were found to be robust and hard wearing, although prone to some fading when located in a south-facing position. The light, low contrast colours originally chosen by designers were found to be less appropriate for outdoor display than darker higher contrast colours, since a small degree of fading significantly reduced legibility of the panels. The 'Vault' signage was subsequently used in the Allotment Life project with darker print to improve longevity and rounded corners for greater safety. Methods of developing interpretation were also informed by consideration of the process used for the Medicinal Garden, with an improved procedure for signing off final copy.

Nature Explorer Backpacks

We were keen to develop a legacy resource for our family audiences that would facilitate exploration in the Gardens, Aquarium and exhibitions spaces. It was decided that a self-led activity was needed, since the Horniman Learning team were fully committed to other event delivery and were unable to schedule the time and space required for additional activities. Play-led learning resources and equipment to facilitate exploration and investigation were identified as the resources likely to be used by children supervised by parents or guardians, so a variety of themed packs were developed along these lines.

Twenty-five backpacks were produced with the Horniman and Wellcome logos – Darwin200 was excluded from the branding on the backpacks to prevent the packs from appearing dated when used after the bicentenary year. Three different themed interchangeable contents were developed for the packs initially and evaluation of their use informed the redevelopment of one theme and the development of a further two themes. The themes chosen were: Medicines from nature (for 5-7 year olds), Medical mystery tour (for 7-11 year olds), Minibeast explorer (5 -7 year olds), Plant explorer (all ages), Bird explorer (all ages). Administration, distribution and explanation of the packs were undertaken by participants in the Museum's 'Engage' volunteer programme, leaving Learning staff free to develop and deliver their core engagement programmes.

Feedback from evaluation of the packs by 58 adults, 27 children under five and 53 children over five indicated that they were enjoyed by the families who used them and they successfully fulfilled their role of facilitating self-led engagement with the Gardens, Aquarium and Galleries (e.g. "*Helped the kids to take in what they were looking at instead of just wandering around*" and "*This was a fantastic activity for the kids – thank you*"). The need for some changes were also identified from the public evaluation and feedback from the volunteers and staff administering the packs, including better signage informing the public about the availability of the packs; numbering packs to facilitate the tracking of inventory; stronger linking to the collections, and making the themed resources age independent. These changes were rolled out for 2010 and the backpacks are to be maintained as an ongoing resource.

Café Scientifique

Café Scientifique events have been running for nearly twenty years and now take place in over forty countries. They usually take the form of an evening meeting in a café or bar where scientists are invited to talk in laymen's terms about their work. The events are known for their informal and friendly atmosphere and the intent is to empower non-scientists to more comfortably and accurately assess science and technology issues, particularly those that impact on their own lives and interests. As such, Café Scientifique provides an established and recognisable framework for running science engagement activities in an informal setting⁷. The Darwin200 project provided an opportunity to test the format of Café Scientifique as an evening event run in collaboration with a local school. The format chosen was a 'Biodiversity Balloon Debate' where four UK species each had a champion in the form of a professional biologist, who argued the case for their continued survival. The arguments put forward were discussed and the audience voted to keep the species for which the most compelling argument had been put forward.

The event was well attended (41 people) and the feedback about the event was very positive, both from the speakers and the audience e.g. "Very interesting. Should be done again. I learnt a lot" and "I thought the debate was brilliant and can't wait for the next one". Problems did occur with the AV set-up during the event, which was noted in the feedback e.g. "Please test the gizmos before the show. They never work first time" and "Difficult to hear. Sound system erratic. Powerpoint needs sorting!". Other feedback suggested changes in the timing of the event: "Really enjoyed Café Scientifique session on Biodiversity. Good format. I'll go to a few Café Scientifique events. Great venue. Was a wee bit too early to make it across the city, otherwise great".

The success of the Café Scientifique format led to its adoption for an International Year of Biodiversity event hosted by the Horniman in partnership with the Royal Society in February 2010, with contributors from GMZ, UCL, NHM and Norwich Castle Museum (for a summary see author's blog⁸). An advantage of the format is that it is sufficiently informal to attract a broad audience and it offers an opportunity to collaborate with other organisations. The Horniman plans to adopt Café Scientifique as a regular event in its Thursday Lates programme.

Music concerts

From the outset of the Darwin200 project there was the intention of working Darwin related themes into the established core programme of events of the Horniman. This was intended to ensure that the new methods of work being undertaken would be supported by well tested methods of engaging our audiences. The Horniman has hosted a series of summer concerts every year for over a decade, and it was decided that for 2009 at least one concert in the series should have a Darwin theme.

In the end all four concerts contained elements relating to Darwin, Natural Selection or nature – as decided upon by the performing artists in liaison with curators in the Musical Instrument department. The pianist Oliver Davies cast a fascinating light on Darwin's taste, personality and home life; John Kenny explored the evolution of musical instruments with a focus on the trombone; Guitarist Rafael explored the connections between flamenco and nature, and Stephen Preston led the final concert with a performance on the baroque flute based upon the sounds of birdsong.

The concerts were attended by at least 250 people and the feedback received was very positive for all performances (e.g. Oliver Davies received comments along the lines of "Brilliant programme, wonderfully researched & written up. High calibre of performance all round. Bravo!"; comments for John Kenny's piece included "The best lecture I've ever seen" and "Loved it! John was magic and would have wanted it to have gone on longer. O am partially deaf and the acoustics for John's soft spoken voice made it a little difficult to hear at times. Still enjoyed this very much!"; Rafael received comments such as "I was absolutely entranced by today's performance. We are very fortunate to have such culture provided for us", and Stephen Preston's feedback included "I learnt how nature can inspire some gifted people to create amazing things to be enjoyed by many of us. Thank you birds!".

Outcomes

During the project period the Horniman had record attendance, with around 753,000 visits to the Museum and Gardens. Since many of our visits are repeat, this means that the Horniman's Darwin200 project reached approximately 375,000 individuals, not counting those who enjoyed the outcomes of the photographic competition hosted online. The programme provided the opportunity to: work in close collaboration

internally and with a wide variety of external organisations; engage new audiences and develop our offer to existing audiences, and trial new methods of working and develop the resources and skills required to support and continue that work. Feedback was very positive and where negative it is being used to improve methods of working. The overall aims of the Horniman's Darwin200 project were achieved and the outcome has helped determine future working.

Large scale national and global initiatives like Darwin200 (and 2010 International Year of Biodiversity) can play a valuable role in providing an organisational focus on science engagement, which can be used as an opportunity to raise the profile of natural science collections. An issue that many museums have with such initiatives is a lack of legacy outcomes, but with imagination, planning and exploitation of the opportunities that arise alongside such initiatives, it is possible to trial new and collaborative methods of work and resource development that could leave a lasting legacy.

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