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NatSCA News

Title: Shout it from the Green Rooftop: raising the profile of Natural Sciences at the Horniman Museum and Gardens

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Source: Hatton, J. & E. Dutton (2010). Shout it from the Green Rooftop: raising the profile of Natural Sciences at the Horniman Museum and Gardens. *NatSCA News, Issue 19*, 22 - 29.

URL: <http://www.natsca.org/article/116>

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Shout it from the green roof top: raising the profile of Natural Sciences at the Horniman Museum and Gardens

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Background

The Horniman Museum was founded by Frederick John Horniman (1835-1906), the second son of John Horniman, tea merchant and founder of 'Horniman's tea'. Frederick collected natural history specimens as a boy and this developed into a more serious passion for collecting later in life. By the end of the 19th century, Horniman had formed a museum which contained many thousands of specimens and cultural artefacts from around the world. In the early 1900's, the museum, collections and surrounding land were donated to London County Council, as a free gift to the people of London forever for their '*recreation, instruction and enjoyment*'. The Horniman today is a charitable company limited by guarantee and a Non Departmental Public Body which receives its core funding from the Department of Culture Media and Sport (DCMS).

Collections

The museum contains around 350,000 items covering Natural History, Anthropology and Musical Instruments. Natural History is the largest collection, with around 250,000 specimens. The Anthropology and Musical Instrument collections are designated. The museum also maintains living collections - 16 acres of gardens as well as a very popular aquarium. The Library is currently housed in a building developed on sustainable principles and is covered by a 'green roof'.

Hands-on the world

The Horniman has a strong 'hands-on' approach to learning. There is a separate handling collection containing around 3000 items housed in our 'Hands on Base'. These provide a close up and personal encounter with artefacts and specimens that reflect those held in the permanent collections.

Community and audience

Thanks to several re-developments over the past decade, the number of visitors to the museum has grown rapidly. During 2009-10, the museum received over 600,000 visitors, 750,000 if the Gardens are also included. Our visitors are mostly local, coming mainly from London and South East England. The audience is diverse; 70% are family groups and over 30% are from the BME community. We have a high number of repeat visitors. The aquarium, Natural History Gallery and Nature Base are amongst the most heavily visited parts of the museum. As in many big cities, most of our visitors have a fairly basic understanding of the natural world. Many struggle to recognise a house sparrow or red admiral butterfly and if they do, very few know much about them.

Raising our profile

Up until fairly recently, there has been greater emphasis on the provision of learning resources aimed at interpreting our Anthropology and Musical instrument collections, rather than Natural Science. This produced an imbalance in on the ground delivery in the museum and gardens. Perhaps more significantly, this imbalance led to a lack of awareness and understanding of Natural Science and the role and use of our collections and their interpretive value at higher levels within the organisation, amongst Trustees for example. Many were not aware of the scope or role of the collections beyond their display in the historic Natural History Gallery.

Over the past five years we have set out to change this and achieve more of a balance. This has involved gaining support from across the organisation and has been achieved primarily through raising awareness in the following ways:

- By recruitment of new and additional enthusiastic curatorial and learning staff and funding (mostly

- through Renaissance London and also City Bridge Trust).
- Development of new Secondary Science and Gardens Learning and Access programmes which connected themes across the collections, aquarium and gardens such as evolution, biodiversity and environment.
- Establishment of a wider programme of activities and events often linked to larger national events such as Science Week, International Year of Biodiversity or Darwin200 (See paper by Paolo Viscardi for more details on this).
- Establishing a plan and programme for the re-development of the Natural History gallery and Gardens.
- Opening the first phase in this re-development - Nature Base, a new hands-on gallery space and associated website (again funded through Renaissance London and also City Bridge Trust).

Nature Base

We opened the first phase in the re-development of our Natural History Galleries – Nature Base in April 2009. This hands-on gallery was aimed at encouraging our core family audience to explore, get involved with and value real wildlife out there on their doorsteps.

Nature Base takes a multisensory, active and participatory object based approach. Instead of filling the space with examples of every beetle or bird you might find in London, we decided to keep things simple and split this relatively small space into areas that lead to the development of some of the skills needed to become real nature explorers (like botanists or zoologists), so observing, identifying, describing etc. We used a mix of real specimens (some live), a few models and made good use of graphics and interactivity to deliver this (Fig. 1).

Interactivity was kept relatively low-tech, employing many tried and tested techniques, developed to suit our audience. This included an easy-peasy video microscope, a sound interactive including 24-hour wild sounds and other light-touch interactivity such as a match-the-leaves tree key and feely-box. We also included some taxidermy to touch (with ethical issues taken into consideration), as well as participatory activity cards and a wild thoughts response card wall (Fig.2). We also included several live exhibits – an observational beehive, harvest mice and Horniman beetle displays.



Fig. 1. Models and video microscope in the Nature Base Gallery.



Fig. 2. A new open display taxidermy mount in the Nature Base Gallery.

The aim was to keep everything easy for children to reach and use, as well as robust and quick and easy to maintain (Figs. 3—4). We knew we would not have funds for any extensive on-going maintenance in years to come. The gallery had to work as a largely unsupervised space, visitor assistants and some additional assistance from our ‘Engage’ volunteers would provide only partial supervision.

Text

Labels were developed to deliver core information and key messages. The number of labels and associated word counts were kept to a minimum, mostly around 25 words. A series of labels headed ‘Capital Creatures’ were designed to draw attention to ‘special species’ in London, some of those listed on the London Biodiversity Action Plan like stag beetles, house sparrows and bats. For those wanting to find out more, we provided identification guides and books in the gallery. We also developed an accompanying Nature Base website where visitors are encouraged to find out more and participate further.

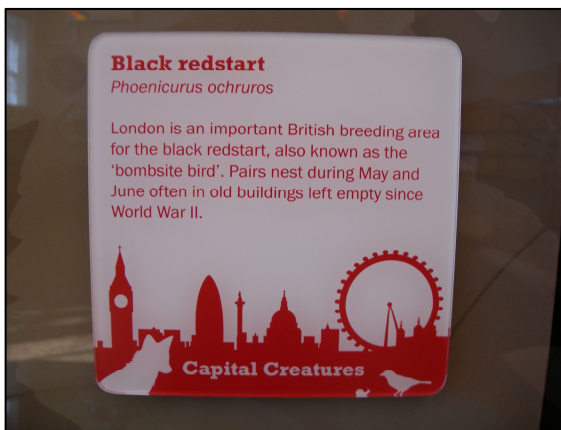


Fig. 3. The comments cards on the Wild Wall.

Fig. 4. Capital Creatures labels highlight the significance of some London Biodiversity Action Plan species.

Nature Base website

As we were not able to include everything in the Nature Base Gallery and knowing that we wanted to make some real links between the indoors and outdoors, we developed our Nature Base website to fill the gap (Fig. 5). The site was aimed at our core family audience and aligned to the Nature Base gallery with its focus on encouraging visitors to get involved in observing and recording nature.

This is an ongoing web project, the timescale from the first kick-off meeting until the live launch of the site was just under a year. The project was managed internally but the design work was tendered for and a web design company recruited for the design elements.

This was a very new venture for the museum, we had not developed a site specifically aimed at a family audience before. We consulted with families at the museum to inform the look and feel, as well as the content before the work started. This was done by recruiting families with children aged 5-11 in focus groups. The family focus group revealed the following:

- Keep it simple and text-light
- Short, interesting facts about species were preferred
- Adults had different perceptions of what the children would like!
- Children were most keen on games and interactivity but were more interested in facts than the adults thought they would be
- They loved the characters!



Fig. 5. The Nature Base website homepage. www.horniman.ac.uk/naturebase

Part-way through the development, we also conducted some user-testing with our after-school museum clubs. This also revealed that:

- Navigation needs to be extremely simple for a younger audience (we introduced a left hand navigation after the site was first launched)
- The games were the most popular element
- They loved the characters!

Our internal discussions about the look, feel and appeal to the family audience, particularly the use (or not) of characters based on our feedback were particularly interesting. We expected games and interactivity to be popular with young people and this certainly rang true. The focus group research was particularly illuminating, when it came to the tone and comprehension of the text. Although, as expected, the children had a low attention threshold for text longer than one or two sentences, they were much more interested in the factual information than their parents (or we) thought they would be.

At the moment the site has three core sections – **Visit Nature Base**, **Help Record Wildlife** and **Become a Nature Explorer**.

The Visit Nature Base section replicates some of the Nature Base gallery online (Fig. 6). It contains images of all of the specimens in the gallery and brief information informed in tone and content from our focus group research.

The initial plan for this part of the site was to provide somewhere for people to find out more after a visit to Nature Base. Anecdotal evidence, however, based on conversations with teachers and families on facilitated sessions at the museum, suggests that this part of the site is also useful for visitors to orient themselves with the space before they come. We aimed to use visual clues for the navigation – click on the images to get more information.



Fig. 6. The Nature Base website showing the animals which can be seen in the Nature Base Display.

Help Record Wildlife

The central section is a wildlife survey (Fig. 7). Visitors can find out about the species we want them to look for and download a colourful survey form. This element of the site was developed in partnership with ‘Greenspace Information for Greater London’ (GiGL), London’s biological records network, they collect and manage data on behalf of London’s green spaces. This has been a really fruitful partnership. Our site links to the GiGL database, so recorders can input their survey results. This means that visitors are getting involved and contributing to the bigger picture of wildlife recording both locally and nationally which has been a really important drive for the whole project.



Fig. 7. The Nature Base wildlife survey, run in partnership with ‘Greenspace Information for Greater London’.

Explore Nature

The final section encourages people to become nature explorers (Fig. 8). We used the three characters to represent different types of explorer – bird, plant and minibeast explorers. The user can choose which character they want to follow. This area of the site is the most interactive and contains photo galleries, challenge sheets to download and games and quizzes.



Fig. 8. The minibeasts Explorer page on the Nature Base website.

Games - Batsense

Games proved really popular. Initially we developed some simple, low-cost games in a quiz format (e.g. identifying birds from their song). Later on, we received additional funding to further develop a game for the site and decided to create an interactive flash game in an arcade style. The player is a bat who must successfully navigate owl and cat predators in an urban landscape, catching insects for energy along the way (Fig. 9).



Fig. 9. The online 'Batsense' game on the Nature Base website. The user navigates the bat through different obstacles and predators to catch insects.

This was a fairly substantial piece of work and involved tendering for a web games company. We are still conducting evaluation on the game but it is receiving a high number of hits when compared with other pages on the site, so we know that it is popular with those using it.

Lessons Learned – Nature Base

- Audience – Nature Base was aimed primarily at families with children aged 5-11. However, the impact and frequency of visits by under 5's and accompanying parents has increased significantly in recent years. We developed activity cards for the older age group - counting bees or mice watch for example. However, we soon discovered that most of these would get scribbled on by the younger visitors. We have now switched to using these cards mostly with school groups which have proved more successful.
- Seasonal changes are hard to keep up with – the gallery was designed with some easy to change areas, so that specimens could be rotated easily or provide an opportunity to respond quickly to a topic of interest. The reality is that due to constraints on staff time, this has not proved as dynamic or quick to deliver as we would have liked.
- The touching taxidermy mounts didn't wear nearly as long as we expected in an unsupervised space. Smaller mounts proved just too vulnerable to the sheer volume of handling by young visitors in the space. Increased supervision by our 'Engage' volunteers and 'please be gentle with our objects' signs have helped alleviate the problem to some degree but not entirely. We now plan to case the smaller mounts and maintain a level of multisensory access to the large mounts – fox and badger, which are more robust.
- Live exhibits – whilst the honey bees and harvest mice have been relatively easy to maintain, our colony of Horniman beetles (aimed at linking an African species named after our founder to beetles you might find in the local environment), failed to establish in the tank and this has been empty for much of the time. Our aquarium team are currently investigating how best to resolve this. This does highlight how unpredictable some live displays can be, regardless of how much time and effort is put into research and consultation along the way.

- Website – this almost took as much time and resources to develop as the physical gallery, writing text, sourcing images, writing briefs and working with designers all took careful planning, teamwork, occasional compromise and time! Our aims and ambitions for the website were high and we soon realised that we could only deliver some of this if we were to coordinate our launch in time for the gallery opening. Entering the world of web designers and game developers was also a new experience for some of us. We would like the website to be more dynamic and more regularly updated and have learnt to appreciate the demands of this on staff time - there's always a new project that needs more urgent attention. We also need to think more carefully about sustainability in the future.
- Marketing – the website needs to be constantly promoted to draw traffic to the site and encourage people to participate in our wildlife survey. The website is promoted in the Nature Base gallery and during activities and events but we could still do more. Marketing needs to be more continual especially during the summer months. Promoting the site via the web and through linking to other sites also needs greater prioritisation.

Positive outcomes

Nature Base gallery – Many thousands of people have visited Nature Base since it opened last year. It is a popular, interactive, up to date family friendly space where families can participate and discover more about wildlife in their local environment. It is often cited as one of the most memorable parts of the museum visit. Nature Base has contributed to the museum achieving its highest visitor figures during 2009-10. The gallery is successful at holding visitors attention and the range of interactivity and the opportunity to get up close and hands-on is key to its success.

Visitors often spend long periods in the space, viewing specimens on the microscope, watching the live bees and harvest mice, drawing pictures of specimens or wildlife they've seen for inclusion on the wild wall (Fig. 10). It has also brought about visible changes in visitor behaviour. Some of our gardeners have noticed children collecting items that are displayed in the gallery in our Gardens. Viewed positively, this means we are having some success in developing skills and interest in exploring nature outside.



Fig. 10. A selection of comments cards from the Wild Wall provide informal visitor feedback.

Nature Base website - Developing the website has provided an opportunity to trial a new approach to developing websites at the museum – a more child-centred look and feel, the use of games etc.

The site is being used. We have had 15,341 unique views from September 2009 to May 2010. Visits to the website and active participation through the wildlife survey show an upward trend. We have developed a very successful ongoing partnership with GiGL, with local people submitting records and contributing to the wider conservation agenda. We have also found that content is transferable across our school and community audiences.

School & Community Programmes – The development of content for Nature Base and Nature Base website have also fed into some of the programmes that link our indoor and outdoor collections for our school and community audiences. Favourites have included building woodlice mazes, welly and story walks, and opportunities to do some planting. Also popular have been those sessions which combine learning with games and physical play, for example, using our enormous parachute.

So, did we raise the profile of Natural Science?

Yes we did. It is clear that the Nature Base gallery and website as well as other new programmes have raised the profile of Natural Science across the organisation. Our Trustees and other external bodies now know more about the collections and gardens and their potential for engagement and increasing knowledge and involvement in Natural Science and now regularly shout about it from the green rooftop too...

Acknowledgements

Nature Base was designed by Ralph Appelbaum Associates Ltd. Nature Base website by Space & Time Design and Batsense by Cimex. To find out more about Nature Base and our other Natural Science programmes visit www.horniman.ac.uk