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## **NatSCA News**

Title: Aren't Birds Brilliant - in Glasgow

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'I thought the interactive nature and use of technology was very well used and created an exciting visual and kinaesthetic learning environment.' (Thornden School)

'All the students were really engaged. Some were truly inspired.' (St Martha's R C School)

'There was a tremendous depth and breadth of science presented in an accessible way.' (Henry Box school)

The changes have been made in response to our evaluation. Alterations have been made to the timing and frequency of programmes; for example extra shows have been scheduled due to high uptake, and A-level programmes with increased capacity have been, and are being developed. Workshops have been scheduled later to allow for transport problems. The length of workshops has changed in response to feedback; a workshop was lengthened, for example, to allow for more time for students to search for microfossils under a microscope. Some teachers suggested that we include more practical demonstrations in our science show

which we have done.

Real Earth Science - the partnership has just completed a 6 month feasibility study to facilitate a three-year project supporting the teaching and learning of earth sciences through on-site programming in museums (with natural history collections), video conferencing, online interaction and Continuing Professional Development of secondary science teachers. This bid is now awaiting a funding decision from a commercial sponsor.

The partnership has also been in discussions with museums, MLA, STEM, Science Learning Centres and other regional based organisations regarding the establishment of a national

Re-living the Great Debate; on of the interactive sessions with secondary school pupils engaged in Real World Science at the Natural History Museum, London.

network to support secondary science teaching and learning with an overall desire to support museums wanting to provide programming for this audience. We are now considering the next steps to take this forward.

### <u>Aren't Birds Brilliant – in Glasgow</u>

Naila Akram, RSPB

Aren't birds brilliant! In Glasgow is a two-year project that was set up to help inspire people about the amazing wildlife that inhabits the heart of this buzzing city.

It is based at Kelvingrove Museum, situated in the west end of Glasgow, which is currently Scotland's most popular visitor attraction, with over 3.5 million visitors each year. Kelvingrove has a deep-rooted significance to many Glaswegians, who visit it time and time again throughout their lives, and it was recently voted Glasgow's favourite building.

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The surrounding Kelvingrove Park and nearby River Kelvin, are teaming with wildlife, providing a haven for many garden and woodland birds. Kingfishers, goosanders and sand martins breed along the river and even a pair of peregrines are prospecting to nest nearby.

However, this fantastic wildlife is completely unknown to many of the local people and visitors to the city. Working in close partnership with Culture & Sport Glasgow and Glasgow City Council, this project aims to address this need by better connecting people with their local natural environment and raising their awareness about urban wildlife. Situated in the heart of the city, people from a wide range of backgrounds are able to learn about and appreciate the fragile natural world that surrounds us.

#### We are doing this by:

- Sensitively installing CCTV cameras at appropriate wildlife sites, to beam live images from nest sites back to the Museum's Environmental Discovery Zone.
- Employing two Information Officers to help interpret the local natural environment and live CCTV images, engaging with over 16000 visitors p/a within the Museum. They lead daily-guided walks through the park, and offer a series of stimulating talks about local wildlife and natural environment in the museum.
- Establishing an environmental field teaching programme we engage with around 3000 school children, all the activities encourage children to get outdoors and experience nature at first-hand.
- We are developing an interpretation trail along the River Kelvin and through the Park, enhancing people's enjoyment of the area and raising their awareness of the wildlife.

#### **Volunteers**

We have a team of 15 volunteers who play a vital role in the delivery of this project. They engage with the public within the museum, carry out guided walks and support the Information Officers in delivering a programme of talks in the museum.

Additionally, volunteers help carry out bird surveys in the park and along the River Kelvin, enhancing our understanding of wildlife within the park and assisting the Park Rangers in creating better areas for biodiversity. This has included work to improve the banks of the river, naturalising the duck pond and planting areas of wild meadows to encourage more wildlife to thrive in this urban oasis.

#### **Support**

This project has received tremendous support from the local community, Glasgow City Council and Glasgow University. The Heritage Lottery Fund and Scottish Natural Heritage fund the project until March 2009.

# <u>Using DNA to verify sex and species identity of dried bird specimens: a tool</u> <u>for correcting specimen records</u>

Patricia L. M. Lee, University of Swansea. E-Mail: p.l.m.lee@swansea.ac.uk

Meticulous archiving of biological material in past centuries has left us with a legacy of natural collections. The Natural History Museum's bird collection is an example: it includes a million skins and a million eggs, representing 90% of known species. These are rich sources for research, and archive collections represent a bank of DNA diversity for research. The sex of any given museum specimen has implications for its research potential, since sex is a key variable in a wide variety of studies, and correct identification of specimens is obviously critical for any study. Applying DNA-based tools to museum collections may be a means for checking and correcting species and sex information in specimen records.

PCR (polymerase chain reaction) technology has undoubtedly increased the potential for research using such DNA-based tools as it enables amplification of DNA fragments many thousand-fold from a small quantity of DNA template. However, museum material still present challenges because maximum PCR amplicon size declines significantly with specimen age, and fragments larger than 300 bp are difficult to amplicon size declines are challenges because maximum processes.