

SCIENCE DIRECTORATE MONTHLY UPDATE



Celebrating our new partnership with UoM

We officially celebrated our new scientific partnership with the University of Manchester at Oakfield last month!

Attendees from both the zoo and the University of Manchester attended high tea in The Oakfield with Mark Pilgrim, CEO, and Professor Dame Nancy Rothwell, President and Vice-Chancellor of the University of Manchester, opening the celebration.

During the event, we showcased some of our incredible students, our ground-breaking research and the impact that our joint-working approach will make in preventing extinction.

With presentations from experts representing both organisations, and from the future generation of conservationists supported through this initiative, we marked the start of this incredible game-changing relationship.



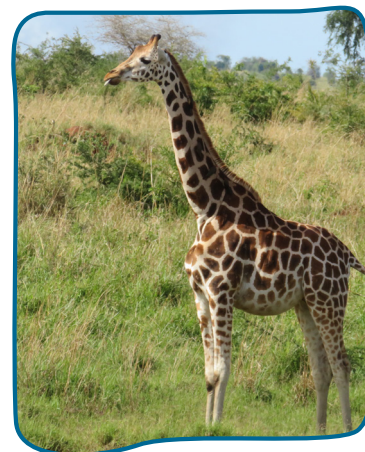
Developing new projects in Uganda

Stuart Nixon was in Uganda in August supervising the second phase of the Kibale giant pangolin research project and visiting a number of additional sites throughout the west of the country where giant pangolins are reported.

Stuart also visited Murchison Fall National Park (MFNP) to meet up with our partners the Giraffe Conservation Foundation (GCF) and head staff from the research and monitoring department of the Uganda Wildlife Authority (UWA) as they translocated 15 Rothschild's giraffe from MFNP to Kidepo Valley National Park.

Key discussions were held with GCF on establishing a CZ/GCF giraffe research project in the Kidepo region and with UWA on the development of a five-year MOU that would see Chester Zoo lead a number of exciting initiatives that crosscut many of our specialisms and would focus on giant pangolins, giraffes, cheetahs, painted dogs and research to guide the future reintroduction of eastern black rhinos into Uganda. Stuart then went on to visit the Uganda National Museum in Kampala to view records and measure skins/scales from giant pangolins in their collection to investigate ways to put GPS devices on the species.

Scott Wilson joined Stuart for the last week of the trip, visiting and meeting with key individuals in the Kibale National Park, Murchison Falls National Park, Semuliki National Park and the Ziwa White Rhino Sanctuary. At the end of the trip, Stuart and Scott met with UWA Directors in Kampala for a very fruitful meeting discussing the development of a formal partnership with Chester Zoo.



News Flash!



Field work commenced in the Loya Wandu region of eastern DRC! We've been supporting our partner the Loya Wandu Community Conservation Association to identify areas supporting okapis, Grauer's eastern gorillas, Congo peafowls and giant pangolins. Their team spent one month in the field and were able to confirm the presence of okapis, chimpanzees, peafowls, forest elephants and other species. Gorillas were also reported in several localised and remote massifs in the region.

Bats at Giant Otters!

An eagle-eyed member of the Horticultural team saw a bat fly into a cavity in one of the posts at the Giant Otter viewing area last month.

Helen Bradshaw who holds a Natural England Licence to survey and disturb UK bat species went to take a look and confirmed that there was a bat tucked into one of the crevices!

A further inspection revealed that three of the four posts had evidence of bat presence in them and Helen is keen to know where else these posts are on site as there may be more of these roosts.

We don't yet know if this is one bat using all posts at different times or if there is more than one bat favouring these posts. The species of bat which was seen couldn't be fully identified but is suspected to be a common or soprano pipistrelle.

Setting up a lab in Kenya

Sue Walker, Becky Moge and Caroline Sanger-Davies, Director of Marketing, travelled to Kenya to finalise the setting up of our new satellite endocrinology lab.

The new lab has now sprung up on Mpala Mpala Research Centre and will focus on using endocrinology to help answer key questions in the conservation of Kenya's iconic megaherbivore fauna as part of our new research partnership with the University of Manchester.

This satellite endocrinology lab has also been established in collaboration with the Kenya Wildlife Service and Lewa Wildlife Conservancy. Both organisations have been vital in helping to import all the equipment and reagents!



Travels & Events

Staff members from the Science Directorate and Collections Directorate met with the Synchronicity Earth team who gave them an overview of their key programmes and thematic areas: Shoals, Congo Basin, Oil Palm, High & Deep Seas, Amphibians, Asia and Freshwater. Chester Zoo staff introduced their areas of expertise and a number of common themes and areas for collaboration were identified. In addition to overlaps in programme priorities, the teams also discussed approaches to measuring impact, developing quantitative metrics, due diligence and supporting new/small NGOs.

Naomi Matthews, giant pangolin project researcher and field consultant, travelled to Brookfield Zoo, Chicago to attend the Pangolin Conservation Consortium's annual symposium. She presented a talk on what we have learnt so far about giant pangolins from our fieldwork in Uganda, Nigeria, DRC and Gabon. Naomi was also able to visit the Chicago Field Museum to share information on rare and elusive small carnivores we have collected from camera trap work across our research sites and also to view pangolin specimens in the collection.

The Education Officer team has just launched a brand new suite of Post-16 workshops. The seven new workshops are geared towards visiting A-level, BTEC and University students and cover topics including Classification, Evolution, Animal Behaviour and two sessions focus on how the zoo achieves its mission.



This summer the Safari Rangers planned a fun programme of Madagascan themed activities to start the build-up for our new walkthrough Lemur habitat! They worked with 18 libraries all located close to our project schools with the aim of providing another opportunity for these students to continue their Chester Zoo journey. Each library had a programme of three workshops spread over the summer to stick with our model of repeat engagement to try to have more conservation impact. In total, the library workshops engaged 803 children and 443 adults.

Conservation Fellow Dr Silvio Marchini and Alex Zimmermann hosted the first Symposium on Human Dimensions of Human-Wildlife Conflict at ESALQ University of Sao Paulo in August. The symposium was attended by around 150 participants and was followed by a two-day workshop with eight human-wildlife conflict (HWC) projects across Brazil and Bolivia (which deal with all sorts of HWCs, ranging from otters to maned wolves, jaguars and tapirs) to develop collaboration to design a common framework for studying and addressing HWCs in South America.

Conserving Montseny newts

Gerardo Garcia, Curator of Lower Vertebrates & Invertebrates, and Adam Bland, Lead Keeper, travelled to Barcelona Zoo to discuss the future of the long-term Life project to conserve the Critically Endangered Montseny brook newt.

The Montseny brook newt is one of the most threatened amphibian species in Europe of which the only *ex situ* population outside of Spain is housed at Chester Zoo.

In addition to meeting with all the partners, this trip also allowed the team to visit re-released sites and highlighted the *in situ* habitat restoration work taking place to protect the species in the wild.

Gerardo and Adam visited Torreferrusa Wildlife Centre, which maintains the largest *ex situ* population of Montseny newts and has a recently refurbished breeding facility. They discussed bio-security and management protocol for the *ex situ* populations, husbandry techniques and ways of advancement to benefit the health and success with newts that are intended for release into the wild.

They also met with the project director and visited field sites in the Montseny National Park to witness the *in situ* conservation efforts, observe the habitat of this species and gain a better understanding of the threats this species faces. On their last day, Gerardo and Adam visited the newly developed facilities for this species at Barcelona Zoo and discussed husbandry practices with the herpetology team there to ensure that this is standardised across the four collections working with this species.



Population modelling

For a six-week period over the summer, the Applied Science Team hosted Phoebe Smith, a Mathematical Sciences placement student from Exeter University. Phoebe aimed to investigate how the Applied Science team could better support Chester Zoo's European Endangered Species Programme (EEPs), which are managed by the Collections Directorate.

Working with Nick Davis, Deputy Curator of Mammals, and Becca Biddle, Technical Assistant to CEO, Phoebe's project included various approaches, from basic data-exploration to complex population models. In the case of the former, Phoebe interrogated the data to identify any anomalies in population-level parameters within the studbooks and used population models to identify whether any such data affected population projections.

On a more complex level, at the request of the EEP coordinators, Phoebe used Population Viability Analyses to investigate whether alternative management actions affected long-term population projections, thereby providing information that may be fed into management decisions.

Phoebe's sterling efforts during her time at Chester Zoo provided useful case-studies for further work in this subject area. When used to supplement the essential 'bread-and-butter' of managing studbooks, such as inputting and managing data, making breeding recommendations and producing Annual Reports, these approaches could add-value to Chester Zoo's population management, particularly with EAZA's new Population-Management structure, including long-term management plans in mind.

