

Six-month Interim Report – IEF, September 2014

Project Title: **Comparative Study of Wild Elephant Social Behavior in Sri Lanka**

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Summary

In the first six months we continued the ongoing long-term research at Udawalawe National Park (UWNP) and commenced preparations for working in Minneriya National Park. The Udawalawe Elephant Research Project (UWERP) has a standing research permit. For working in Minneriya, we had to first obtain permission from the Department of Wildlife Conservation (DWC), which we received in June 2014. In July Dr. de Silva was in Sri Lanka where she met with her field staff, wildlife officials and made plans. The two field staff of the UWERP then undertook the field visit to Minneriya in August. We established contact with the park authorities, explained our goals, evaluated the field data collection protocol and finally began the enormous task of photo cataloguing the elephants of Minneriya using methods established in Udawalawe. Below we discuss the details concerning each project, focusing mainly on the new work to be done in around Minneriya and the “cultural triangle”.

The Udawalawe Elephant Research Project

The UWERP was occupied in June and July with ongoing research and the projects of Michael Pardo, a graduate student from Cornell University, as well as visiting researcher Lucy King of Save The Elephants. UWERP field personnel facilitated these two research projects by providing field support in driving, finding the elephants, identifying the individuals and helping to conduct experiments or collect data. Michael Pardo conducted pilot experiments investigating the response of elephants to playbacks of elephant vocalizations to determine whether we could use these to test their social awareness. Dr. Lucy King investigated the reaction of elephants to the sound of bees. Concurrently, we collected our long-term monitoring data which consisted of a) identifying all individuals b) monitoring any births, deaths, injuries etc. c) recording the locations at which elephants were observed via hand-held GPS receivers.

During this time we submitted a short note to Gajah about EARS (Elephant Attribute Recording System) which is a quick-reference photo ID database built on the MS Access Platform. UWERP had previously developed this program (with independent funding), which was released online earlier in 2014, and is available freely for download. The note should appear in the next issue, and we hope it will be a useful tool for conducting individual-based studies of elephants elsewhere.

Earlier this year and last year there had been several reports in the news of attempts at snatching elephant calves from the wild, including in Udawalawe. While no such incidents occurred to our knowledge during this time, we did detect that one of our well-known tusker calves, a six year old with the ID T458, had rope injuries around his legs that indicated a failed capture attempt.

We observed that apart from a handful of activists, conservation organizations in Sri Lanka were not strongly pursuing this issue. This is likely because the individuals responsible are politically influential. However we consider a non-negligible danger to the wild population given that our own research shows our population to be reproducing quite slowly, with over half of breeding females taking six years or more to produce a calf.

While there was local press coverage, there was little international attention. However, a group of international NGOs wrote to the President of Sri Lanka expressing their concerns and a few conservationists did go on record on some news outlets such as Mongabay. Dr. de Silva provided an interview to journalist Christina Russo in National Geographic's blog *A Voice For Elephants* to draw attention in the international press to the various aspects of this culturally and politically sensitive issue, hoping especially to increase the awareness among foreign tourists about the threats to elephants from illegal capture in order to feed the captive population. It is our belief that although animals may initially be sought after as displays of status or as vessels to propagate cultural traditions (such as the festival pageants featuring elephants known as *peraheras*), there must ultimately be an economic incentive for doing so created by public demand for experiences with captive elephants. Much like ivory, this demand must be eliminated in order to stop the captures. However, these issues do not garner as much attention as the ivory trade and thus much greater awareness among consumers – locals as well as western tourists – is needed. Importantly, local voices are needed to shift the cultural attitudes and values concerning the role of captive elephants within the country, NOT international pressure as the latter can backfire. Where international organizations can help is in strengthening international laws and registration requirements for all elephants in captivity within range states.

Link to article and photographs:

<http://newswatch.nationalgeographic.com/2014/07/16/qa-elephant-conservation-challenges-in-sri-lanka-a-conversation-with-shermin-de-silva/>

The Cultural Triangle

The DWC holds four meetings annually which review research proposals (typically in March, June, September and December). The first meeting following our IEF award took place in June. We received permission from the DWC to conduct research at in the Minneriya-Kaudulla National Park complex. The DWC are generally extremely supportive of our work. We therefore additionally requested free admission to the parks (which we have in Udawalawe) and discounted or free accommodation at the DWC training center located in Girithale, fifteen minutes away from Minneriya NP. Unfortunately due to various engagements which the DWC head office and Director General were engaged in at the time, we could not obtain these special allowances in time. Since elephants are only found in the MNP complex during the peak dry months which end in September, we decided to go ahead and pay the daily entrance fee as well as obtain paid lodgings for the purposes of the pilot study.

U. Sameera Weerathunga and T. V. Pushpakumara (who goes as Kumara) of the UWERP arrived in the vicinity of Minneriya on August 11th and met with the park warden, who was already familiar with the work of the UWERP as he had previously served in Udawalawe. He was therefore very supportive

and the park staff also took to heart the aims of the project. We therefore had minimal challenges in commencing the work.



Photo 1:
Elephants
predictably gather
in large numbers
in the basin of the
Minneriya
reservoir each
year, an
uncommon
occurrence
among Asian
elephants.

Minneriya NP and the adjoining Kaudulla NP (KNP), which is also centered on a man-made reservoir, are connected to a vast forest complex, which is a patchwork of protected areas under both the Department of Wildlife Conservation and the Forest Department. MNP and KNP have the best access to elephants, since they have roads. The road networks in both are much more limited than in Udawalawe, and in contrast to Udawalawe elephants can only be seen in the reservoir basins in dry months. They are largely unfenced, which also contrast to Udawalawe. This means that elephant movements are much less constrained as a result.

This context is immediately evident in the sheer number of elephants which congregate at these locations during the dry months, a phenomenon which has been packaged to tourists as “the Gathering”. It’s not known at this time exactly how many animals actually appear here, though it is suspected that it may be over a thousand. For comparison, when the UWERP was started nine years ago, it was suspected to host around 500 animals but we found the number closer to 1000. So, we are excited to see whether prior guesses for Minneriya will prove to be accurate or not. The first thing to do of course, was to take photographs. The team therefore focused on taking high quality photographs of identifying features for all individuals they encountered, especially of the ears. In total we took 1931 photographs (!).

From informal discussions with the park staff, they ascertained that 2014 had been an exceptionally dry year (subjectively speaking, we will need to verify this with actual rainfall records) for the area. Herds could appear in the reservoir bed during the mornings, but they were in greater numbers in the afternoon. In mid-August the team found that large herds had already gathered. Toward the latter half of August, the weather shifted with the first signs of rain. The herds immediately began to break up, appearing in ever smaller groupings on subsequent days. This pattern is well-known as Minneriya NP has been a tourist hotspot during these dry months. Unfortunately, it is also known that safari drivers pose an ever-present disturbance for the elephants (see photos 4 & 5).



Photo 2: Front views like these are the best for ID assignment, since ears can be asymmetric.



Photo 3: Profile views are also useful since there is some variation in body shape.

Photos 4&5: The down side of "ecotourism" is that safari operators crowd elephants and become a nuisance, invading their space.



An interesting difference with the Udawalawe elephants was already evident. Sameera observed that unlike in Udawalawe, where social units are very distinct from one another and rarely form such large aggregations, the large herds in Minneriya during the peak dry months made it very difficult to pick apart distinct social units. They appeared to be far more cooperative than the ones in Udawalawe. According to Sameera, it was as though in Udawalawe the elephants were largely concerned with competition amongst themselves, whereas in Minneriya they were somewhat united in the face of human disturbance. This is an intriguing phenomenon, showing how relatively innocuous human behavior may be influencing social dynamics in the two areas, acting on top of the already different environmental circumstances.

In addition to photographs and written notes containing their observations,

the team also recorded GPS locations of all elephants they encountered, analogous to the data collected in Udawalawe. The task over the next several months is to assign ID numbers to all individuals they encountered, create an ID catalogue, and also create a quick reference database using EARS. In 2015 we hope to visit Minneriya earlier, in July, so that we will have a longer window of observation before the rain appears.