

Cambodia's Elusive Elephants Caught Mating for the Camera

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Introduction

In January 2010, the Cambodian Elephant Conservation Group set up five camera traps in a remote, previously un-studied area of approximately 30,000 ha called the Dalai mountain plateau, located in the northeast corner of the Phnom Samkos Wildlife Sanctuary in Cambodia's Cardamom Mountains. Anecdotal local reports hinted at the presence of elephant in the locality but this was not yet confirmed, despite several biological studies of the broader Cardamom landscape. The aim of this small study was to a) confirm the presence of elephant on the mountain plateau (important information for protected area managers, as the upgrading of roads threatens to increase the level of habitat fragmentation between the northern area of the wildlife sanctuary and the extensive Cardamom forests to the south) and b) if elephant were present, gather as much data as possible on numbers of males, females and young.

Method

Fauna and Flora International camera trapping expert, Jeremy Holden provided technical advice and initial training to the project team on camera trap setup and placement. Team members trained included FFI field team members, national counterpart staff from both the Forestry Administration and Ministry of Environment, as well as biology undergraduate interns from the Royal University of Phnom Penh as well as rangers of the Phnom Samkos Wildlife Sanctuary.

Our five Reconyx RC-55 camera trap units were placed strategically to maximize capture of elephant around the plateau on the top of Dalai Mountain, at 1030 masl elevation, in the northwest of the Phnom Samkos Wildlife

Sanctuary. Two cameras were set around a spring and saltlick which is the only water source during the dry season, with others set along old logging trails along ridges which showed recent sign of being used by elephants and gaur. Cameras were only checked on an ad-hoc basis every 6-8 weeks due to funding limitations with batteries proving sufficient to last in excess of this period.

Results and discussion

Although large mammals such as gaur were captured by our cameras during the first six weeks of our camera trapping efforts, images of elephants eluded us during the first six months, despite the field team regularly coming across elephant tracks and sign around the survey site. However the second half of the project yielded many instances of elephants being captured by our cameras, and more amazingly, captured courtship and copulation behaviour, right in front of one of our cameras. As far as we know, this is the first time this has been recorded in Cambodia and has proven that this small sub-population of elephants still has breeding potential, although long-term viability is still in doubt and would require further study to determine.

The photos shown here are the highlights from a sequence of 60 photographs capturing courtship between two elephants over a two-hour period. The bull appeared to circle the female several times in front of the camera before mounting the female. The same pair was captured using the same trail over a month later, and again at similar intervals throughout the study. This success was publicized via a blog on the FFI website, which can be viewed at <<http://www.fauna-flora.org/a-glimpse-of-cambodias-elephants-mating-for-the-camera/>>.



First shots of elephant mating sequence, showing female being pushed to the ground, at 7.54 pm



Copulation



Elephant mating sequence continued



Elephant mating sequence continued, with male elephant mounting the female



The pair continues to court up and down the forest trail until 9.52 pm

It is estimated that 5-6 individual elephants were captured on camera throughout the study. Although this is a relatively low number, we conclude that the area is of significant importance for the resident elephants, as evidence of sign and activity was noted on almost every trip to check camera traps, despite not capturing actual photos for each occasion. This was largely due to the small number of camera traps limiting chances of photo capture, but was also a result of camera malfunction during extremely wet weather between May and September. Elephants were never recorded in groups larger than two individuals, and it must be noted that no data on elephant calves or juveniles were collected either by photo or track and sign. This could be because the study site may form part of the outer home range of the sub-population, with any larger elephant herds rarely venturing onto the plateau, or that the sub-population is in fact very small.

CECG plans to continue and extend our camera-trapping programme next year and beyond to explore deeper into the forest north of the Dalai plateau and see if the copulation events captured by camera does indeed result in successful pregnancy and birth of an elephant calf.

We also encountered fresh bear sign on numerous occasions and have now determined that both native species – the Asiatic black bear (Fig. 1) and Malayan sun bear inhabit the plateau. Asiatic black bear was recorded on three occasions, as was Malayan sun bear. Other interesting finds from the study include evidence of a small but apparently thriving gaur population, with individuals of both sexes of different size recorded almost every month as well as photos of a very young calf and huge adult males (Fig. 2).



Figure 1. Asiatic black bear.



Figure 2. Gaur calf (top) and adult (bottom).

Our cameras only revealed three instances of what looked to be small groups of poachers / hunter gatherers during the whole 12 months of camera trapping, which is an extremely low frequency by Cambodian standards. It is hoped that due to its relative inaccessibility and this new camera trap data, that with continued protection from law enforcement efforts, few human pressures will impact this area in the future.

CECG continues to support villagers experiencing human elephant conflict inside the Phnom Samkos Wildlife Sanctuary and at other sites across Cambodia currently experiencing extremely high levels of deforestation and habitat conversion. We anticipate HEC emerging at new sites in the near future, as people and elephants continue to compete for land and forest resources. CECG plans to share findings of this study, and others, to relevant line ministries during an upcoming planned review of Asian elephant status in Cambodia and development of a National Action Plan in 2012.

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