

## **AMBOSELI ELEPHANT RESEARCH PROJECT REPORT FROM THE FIELD, SEPTEMBER 2002**

### *Amboseli*

It's the dry season in Amboseli and the Park is full of animals. Sometimes it almost looks like a barnyard with all the elephants, buffaloes, wildebeests, zebras, Grant's and Thomson's gazelles packed in and around the swamps. This year we are experiencing a drought with below average rainfall in what should have been the "long rains" in April and May. The "short rains" are supposed to come in late October. We're keeping our fingers crossed.

In the meantime, Amboseli's swamps are providing one of the last sources of water in the ecosystem, but water is not the major problem—it is lack of food. The swamps and swamp edges have the last of the vegetation and everyone is competing for that food. Fortunately, so far the situation is not critical. If the short rains come on time the animals will be able to make it.

### *Elephant News*

The elephants are doing remarkably well considering the poor rains. It's been an unusual year in that only 13 calves have been born, which is the lowest birthrate since 1978. One might jump to the conclusion that this was a bad sign, indicating that the elephants were not in good condition or stressed, but it's not the case at all. The simple explanation is that almost all the females who could have given birth in the last four years had already given birth by the beginning of this year. During 1999, 2000 and 2001, 254 females (out of a potential 287) gave birth and since the average calving interval is four to five years there is no way that they could have given birth again so soon.

What is interesting is that most of the population came into breeding synchrony. There is an explanation for that as well—*El Nino*. In late 1997 and 1998 Amboseli received the highest amount of rainfall since the project began, double the average. An abundance of food resulted, all the elephants got fat and happy, and soon started reproductive cycling. Twenty-two months later in 1999 and 2000 baby elephants started raining from the skies.

So far this year there have been only 12 deaths, and only two of these are known poaching or spearing cases. An unidentified female thought to be a elephant from the Kilimanjaro population was speared outside the Park and Tuo, Tuskless's 22-year-old son, was killed across the border in Tanzania and his tusks and all four of his feet were taken. Despite these losses, we are actually going through a relatively peaceful period and we are doing what we can to minimize any human-elephant conflict.

We had one miraculous resurrection. The magnificent old matriarch of the TC family, whose death was reported in the last report, was found alive and healthy in

the Kimana Sanctuary, which is to the east of Amboseli. Her family had been in Amboseli without her and we assumed that she had died. It seems Slit Ear just didn't want to make the trip over here and decided to stay in the small paradise of Kimana. It was a great relief to all of us because we are always very sad when one of the old matriarchs die. Slit Ear is one of the main characters in my book *Elephant Memories*. Estimated to be over 60 years old, she doesn't have many years left, but we still hope she will be around for a while longer.

One of the other old matriarchs definitely did die this year, Horatia of the HBs. What a splendid animal she was, a sort of grandmatriarch who led her own family as well as the BCs and JBs. We thought she was well into her 60s but her teeth indicated that she was in her late 50s. Horatia was such a big female with large, thick tusks that we must have overestimated her age. The families that made up her bond group are undoubtedly suffering from her loss. The next oldest female is Horatia's daughter Hazel, who is about 42. She will certainly take over the HB family but we don't know if she'll have the clout to lead the BCs and JBs as well.



*The TA family in the southern glade of the research camp: Tonie on the far right and Tulip third from the right*

I was delighted when the TAs came into camp a few days ago and did their usual thing of feeding right in amongst the tents thereby getting all the grass that the others are too shy to feed on. It was good to see them looking relaxed. They've had

such a tragic few years with the killing of both their matriarch Tuskless and her younger sister Tilly. Remarkably, Tilly's calf has survived, making her the youngest calf in Amboseli ever to survive a mother's death. Born in February 2000 she was only 18 months old in August 2001 when poachers killed Tilly. She has mostly been cared for by her older sister Tefilah, who is eight, and also by Tulip, Tuskless's 18-year-old daughter. The family is led by Tonie who is the only large adult female remaining. Despite their losses, the TAs seem to be survivors. We just hope that they can live in peace now and in the future.

Meanwhile, the EBs, led by wonderful Echo, have developed a very clever, if "illegal" strategy to side step the drought. In the middle of Amboseli National Park there is a 400-acre area owned by the local government, the Kajiado County Council. Inside the area, known as OI Tukai, are three lodges. A couple of years ago another scientist working in the Park erected a large electric fence to enclose the whole area mainly as an experiment to see how the vegetation would do in the

absence of elephants. The fence was successful for a while, but Echo decided that the young trees growing inside the fence should be available to her and her family. Not in any way a violent or aggressive elephant, Echo didn't knock down the fence. Instead, she figured out a way to walk across the cattle grid after large trucks kept knocking down the overhead wires. Now the EBs go into OI Tukai every night, feed on the tasty vegetation and leave in the morning. Several bulls have also discovered that they can get in and out with no trouble. So far with less than 30 elephants in the enclosure, it is hoped that most of the young trees will survive.



*Erin & calves  
with Echo &  
EmilyKate  
behind cross the  
cattle grid in the  
morning looking  
innocent and  
unconcerned*

### People News

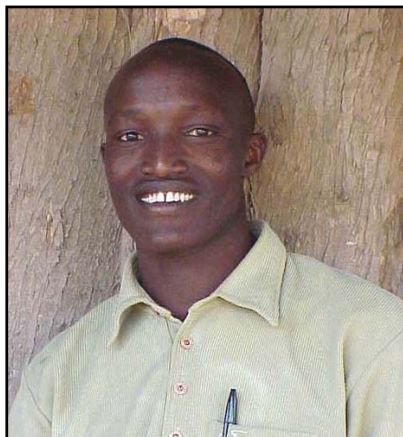
AERP has been going from strength to strength since becoming fully independent in April 2001. Two scientists, who have long been associated with the Project, have recently joined in a more formal way and both are contributing enormously to its revitalization. Joyce Poole, in her role as Scientific Director, is overseeing the data collection and monitoring, liaising with visiting scientists, and initiating new research. She has taken a huge burden off me, which is already allowing me to better carry out my many other roles. Harvey Croze, who actually started AERP with me in 1972, is acting as a sort of jack-of-all-trades, otherwise known as Senior Advisor. His skills include database management and so he has taken over the very important role of maintaining the huge bank of data from the 30 years. He will also be in charge of the GIS or mapping component, which has just entered the 21<sup>st</sup> century with the help of ESRI, the software company that produces the state-of-the-art programs ArcView and ArcInfo for integrating maps and data. ESRI has very generously donated the programs and experts to help AERP get up and running with full GIS capacity. They also organized the donation

of eight computers from HP/Compaq, plus six hand-held data collection devices from Trimble, as well as satellite photos from NASA and Digital Global. With these tools topographical and vegetation maps have been created with the latest GIS tools and much more is planned for the future.

There are two new faces on the Project as well. Tom Morrison, part of the Duke University team, arrived in May to spend just over a year in Amboseli collecting data for the DNA and social relationships study. Beth Archie, who has been doing her Ph.D. research on the subject for the last three years, overlapped with him for three and a half months and has just returned to Duke to carry out lab work on the dung samples. Sadly for her and us, this was her last field season. We hope she'll come back in some capacity when she has completed her doctorate.



*Beth and Tom in camp in June*



The second new person is a temporary employee, David Sitonik, a young Maasai man from the local community. David has been accepted at the University of Nairobi to study wildlife management, but he does not have the funds to pay for his tuition. While he and AERP are trying to raise the necessary money, he is working on our scouts program teaching the scouts how to use GPS units.

*University student, David Sitonik*

Last year we hired seven Maasai men to act as research scouts. Since we have a policy of non-invasive techniques in our research methodology, we no longer radio collar animals. In order to find out where the elephants are going when they leave the Park we send each Maasai scout out to record where they see elephants or signs of elephants (footprints, dung, results of elephants feeding on trees, etc.) Previously the scouts were simply noting down the Maasai name for where they saw these signs, but now David is teaching them to take GPS readings.

*The seven scouts plus Saruni Seleka, our community officer and Soila Sayialel, AERP's project manager.*



In October we will be receiving a donation of GPS units organized by AECT Trustee Bruce Ludwig

and the scouts will be able to start using these themselves.

AERP plans to start a scholarship program for people like David from the community that surrounds Amboseli. The area is suffering from a lack of education, with very poor schools and almost no funding for promising students. Many children, especially girls, never go to school; those young Maasai that do get to school mainly go only as far as primary level; the ones who make it into secondary schools often have to drop out for lack of funds; and finally only a small handful make it to university. We believe that the education of the Maasai is an extremely important component in assuring the future of Amboseli including both people and wildlife.

### 30<sup>th</sup> Anniversary

The big news for AERP was its 30<sup>th</sup> Anniversary, which was celebrated on September 1. Exactly 30 years ago on September 1, 1972 Harvey and I began the Amboseli Project by starting the photographic recognition file. The first family we photographed on that first morning became the AAs. On that day there were 13 animals and we were able to photograph each of the three adult females, one young female, and a few calves. The biggest female, the matriarch became known as Annabel, the other two females were named Alyce and Amy, and the young female was called Alison. Today, Amy and Alison are still alive and three of the calves, Amelia, Agatha and Abigail have grown up and are the mothers of many calves themselves. The family has grown from the original 13 to 33 plus several independent males out in the world; Amy leads one section of 27 and Abigail leads another smaller group of six. It appears that she has decided to split off from the main body of the AAs and form a new family of her own.

To celebrate the occasion, Harvey, his wife Cristina, Joyce (who herself has been with the Project since 1975) and her husband Petter and I went out to try to find the AAs. They are the easiest of the families to find being very predictable in their movements, but, of course, on this day they weren't where they're usually found.

After nearly three hours of searching we finally discovered them moving towards a swamp called Longalong in the western part of the Park.



*Joyce, Harvey and Cynthia celebrate AERP's 30<sup>th</sup> Anniversary with a glass of champagne and the AAs crossing behind on the horizon*

AERP is one of the longest running projects of its kind in the world, that is, an uninterrupted study of known individuals over time. The only other projects that are comparable are a few primate studies, most notably Jane

Goodall's chimpanzee research, and some other mammal studies, such as red deer on the Isle of Rhum and lions in the Serengeti. We are understandably proud of what we've accomplished and hope to keep the Project going for at least another 30 years. That would be the lifetime of one elephant.

### Developments

AERP went through a construction phase this year. First it became an absolute necessity that we build large culverts to insure that we could get to the camp in the wet season. During the last *El Nino* we were forced to drive through a lake of three feet of water whenever we left or returned to camp. KWS did not have the funds to carry out the construction so loyal AERP donors, Paul and Jane Schosberg, provided the money to do so and the International Fund for Animal Welfare



(IFAW) office here in Kenya helped us find a contractor and oversaw the financial end of things. (AERP has a close relationship with IFAW because Cynthia is one of their elephant advisors and the regional director, Michael Wamithi, is a former

Amboseli warden.) Of course, we should have known what would happen as soon as we built the culverts. The rains failed and now the culverts stick up out of the dry surroundings. It will soon change, however, especially since another *El Nino* is predicted.

Joyce's husband, Petter Granli, who is something of an alternative technology expert, has been helping us with improvements in the camp. Because the swamp water in Amboseli is brown and smells of rotting vegetation, we always had to bring water in from one of the lodge bore holes or springs. For bathing we heated the water with firewood. Neither system was very efficient. Thanks to Petter we now have a well which fills from the swamp through a rock and sand filter producing remarkably clear, pure water. It's pumped up to a header tank with a rather cleverly designed foot pump. He also installed a large solar panel to heat the shower water. So now with these improvements and the solar panels we already had for lighting and refrigeration, we have become even more eco-friendly. It's too bad we still have to do our work with petrol or diesel driven vehicles. Maybe one day we'll be able to change that as well.

*Cynthia Moss*  
*Amboseli*  
*September 2002*