

Amboseli Trust for Elephants Amboseli Elephant Research Project Annual Report 2004

GENERAL CONDITIONS

I'm sorry to say I don't have good news to report in terms of the environment. Amboseli has had very low rainfall for two years in a row now and we are presently in a severe drought situation. The long rains (March-May) were poor this year and now when we are supposed to be getting the short rains (October-November) Amboseli has received virtually no rain at all. In my 32 years in Amboseli I have never experienced a complete failure of the short rains. There is water available for drinking in the permanent swamps but not enough food. So far the elephants are not starving, but if there is no rain until March there will be deaths. We're all keeping our fingers crossed that some rain will come in December, which is still a possibility.

RESEARCH

Moving on to other project news, despite the pressures of the drought, AERP is thriving.

Change of Residence

In October Joyce Poole moved to Norway with her husband Petter mainly so that her daughter Selengei can attend an international school there. Joyce is continuing to carry out her work as AERP's Scientific Director. Much of her work always consisted of e-mail correspondence with research colleagues and people requesting information and she is able to do that just as easily from Norway as from Kenya. She and Petter will also continue with their fascinating work on the Savanna Elephant Vocalization Project. We miss them but they will be coming out to Kenya several times each year.

Elephant Monitoring and News

The three field researchers, Soila Sayialel, Norah Njiraini and Katito Sayialel continue the day-to-day monitoring of the Amboseli population. The information they gather on individuals, families, group size, location, activities, associations, births, deaths, matings, etc. is the backbone of the whole Amboseli project. These long-term data are vital to our understanding of elephant social and ecological dynamics.



A newborn December calf

Aerial surveys, plus ground surveys by our seven Maasai scouts working outside the national park, reveal that the elephants are going farther and farther a field these days which is good news. They appear to be returning to their old migration routes and range. Many of them are deep into Tanzania and numerous bulls and some families do not return to the park for months and in some cases years at a time. With a growing elephant population this return to former range is welcome because it relieves the small national park of the pressure of supporting so many elephants. The park is only 150

square miles. The ecosystem over which the elephants are ranging is at least 2500 square miles. At any one time there are rarely more than 300 elephants using the park.

As of the end of November 2004 there were over 1350 elephants in the population. More than 60 calves were born and there appears to be a second burst of births occurring now in December. This is typical of birth patterns in Amboseli. Towards the end of the long dry season there is little mating activity. About two months after the rains fall the elephants become sexually active again, which would be late January or February. After a gestation of 22 months calves are born beginning in December.

Mortalities have been low so far this year. One death I didn't report in my last letter, because it occurred in December 2003, was that of the oldest and grandest of Amboseli's matriarchs—Slit Ear of the TC family. She was estimated to be in her mid 60s and was one of the featured individuals in my book ELEPHANT MEMORIES.

In 2004 we lost some other old friends among the elephants, but I'm happy to report that Bad Bull, at well over 60 years old, is still going strong. He came into musth this year and was seen pursuing Joyce of the JA family. Bad Bull was the one I wrote about who was getting into trouble in the farms in Kimana to the east of Amboseli. Through AERP's generous donors we were able to get the fence repaired, if only temporarily, but it saved Bad Bull.

Echo and the EB family are getting bigger and bigger and now number 28. When I first met them in 1974 there were only seven in the family. Erin's son E-Mail has miraculously survived his mother's death. The first calf born to the population on New Year's Day 2004 was Edwina's female. She has been named "Elana" by Mark Sower, a young advocate for elephants. Mark has been following the lives of the EBs since he was 10 years old.



Edwina playing with her younger brother 13 years ago: she was learning how to be the successful mother she is today with three healthy calves

Life for the elephants is not all droughts and conflicts. Babies are being born, youngsters are growing up, males and females are reaching maturity and males are coming into musth for the first time. In September when my colleague Phyllis Lee was out from Cambridge University we came upon a 13-year-old female, Ipomoea, in oestrus. She had not yet had a calf and had not been recorded in oestrus before so it may very well have been her first oestrus. She was surrounded by several males, but there was only one in musth. He wasn't a big male but he was able to dominate the others. Much to our delight we recognized him as Henry (M314) a 28-year-old male. About 10 minutes after we began watching the group, Henry and Ipomoea mated. The reason we were so excited is that he is one of the first males whose birth I recorded (in May 1976) and was now old enough to come into musth. He was one of the calves that Phyllis and I studied for our calf behavior and development research. As she said, "It was like seeing one of your kids go out on his first date." Well maybe that analogy isn't quite appropriate, but we were thrilled. It's this kind of observation that makes watching individual elephants over a long period of time so fulfilling.

DNA Project

The analysis and writing up of the DNA project is now being carried out at Duke University by Beth Archie and Julie Hollister-Smith. Beth is concentrating on relatedness and behavior of the females and calves; Julie is studying paternity. The lab analysis for Beth's study is completed and she is now writing up her Ph.D. Julie returned to Kenya in September to collect some more dung samples from adult males. Her preliminary results are fascinating. Since the study began we have known who the mothers of calves are, but we could only guess at who the fathers are. She has been able to assign fathers to 80 calves. We are pleased to find out that our field observations of mating and guarding behavior are good indicators of who the father is going to be. In some species, females are very sneaky. They appear to be paired to one male but they actually mate in secret with other males. Elephants are less devious.

Human Elephant Conflict

More and more of our effort is being expended on dealing with the community, either immediately when there is a crisis or strategically such as our new project on human-elephant conflict. This project aims to find and test appropriate elephant-deterrent solutions in agricultural areas (based on our research knowledge of elephant behavior) and then to help farmers implement the solutions on the ground. Fortunately, we have recruited a very capable person, Winnie Kiiru, to manage the project. Winnie comes to us from the Born Free Foundation, for which she has been the East African Representative. She is also the Regional Representative of the Species Survival Network, a group of 67 non-governmental organizations working together to ensure the survival of species. Winnie worked for the Kenya Wildlife Service from 1992 to 1997, first as a research scientist for KWS's Elephant Management Program, which at that time was directed by AERP's Dr. Joyce Poole, and then as Community Specialist on human-elephant conflict issues. Thus she is very well qualified and comes with a wealth of experience. She is hoping to complete a Ph.D. based on the Amboseli work and we are trying to find funds for her time at university.

A great deal of effort was spent during the first half of this year writing the proposal for this important project. It was written mainly by Petter Granli with major input from Joyce Poole, others from AERP and personnel from the School for Field Studies who will also be carrying out some of the work. The effort paid off and AERP has support from the U.S. Fish and Wildlife Service, the Born Free Foundation and the International Fund for Animal Welfare.

Maasai Attitudes Study

Fitting in nicely with the human-elephant conflict project is a new study on the attitudes of the Maasai to elephants, other wildlife and conservation in general. This research began in July and is being carried out by Christine Browne-Nunez, a Ph.D. student from the University of Florida. Working with one of our university scholarship students, Grace Masarie, Christy is conducting interviews with a cross section of the Maasai community surrounding Amboseli.

OUTREACH AND TRAINING

Capacity Building

The capacity building activities of the Amboseli Trust for Elephants (ATE) take three forms: university scholarships, secondary school bursaries and the Maasai Scouts Program. The aim is to have, at any one time, at least two university students and eight secondary school girls with their tuition and some basic expenses being provided by ATE.

All of the scholarship recipients are from the local Maasai community in the Amboseli ecosystem. David Sitonik, from the eastern part of the ecosystem is completing his third year in a BSc Biology

degree course at the University of Nairobi. Grace Neeiyo Masarie is in her final year at DayStar University in Nairobi, where she is concentrating on Community Relations. Agnes Masoi Kureroi is taking a diploma course in Pharmacy at the Medical Training Center in Nairobi.

Silantoi Metui and Josephine Pilanoi are the two secondary school scholars for the current year. (See the separate Scholarship report for more details on these outstanding students.)

The Maasai Scouts program is not formally educational but it fosters greater community participation and understanding of human-wildlife interaction. ATE hires and trains seven Maasai youths to patrol the edges of the ecosystem recording location and signs of elephant presence. The scouts are provided employment in a depressed rural area, additional insight into the importance of elephants in their world, and they in turn augment the AERP database of elephant distribution. The work of the 'ATE Scouts' is integrated into the larger Tsavo-Amboseli Maasai Scouts program.



Scholarship Student David Sitonik in the field in Amboseli

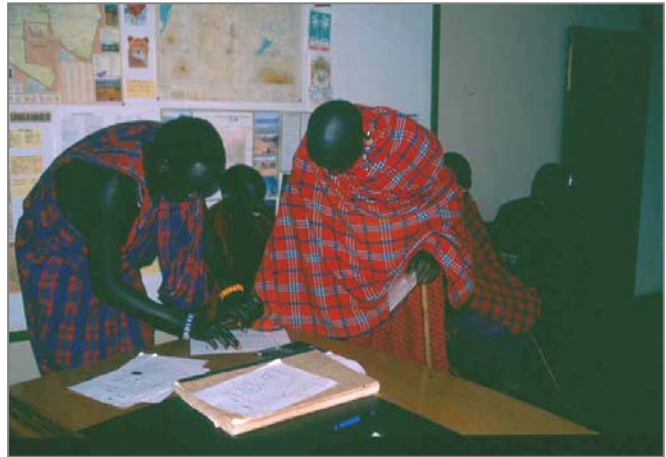
ATE's capacity building activities are interwoven in a number of ways. For example, David Sitonik, one of the university students, has helped train the scouts in the use of GPS (Global Positioning Satellite) receivers and Grace Maserie is helping train interviewers for the Maasai attitudes study. In this way, it is hoped that the conservation ethos as well as specialized research and management skills will permeate the community on whose goodwill the future of the wildlife ultimately depends.

Community Relations

Through the excellent skills of Project Manager, Soila Sayialel and our Maasai Liaison Officer, Saruni Seleka, AERP is effectively in daily dialogue with the members of the local community on issues dealing with elephants and sometimes more general problems. We are going through a particularly critical time now because droughts cause serious conflicts between wildlife and the Maasai. When Maasai livestock and wildlife are crowded into one small area tragic interactions can occur. There are predatory attacks by lions and hyenas, but elephants will also kill cattle and smaller livestock when they come upon them suddenly, especially in thick bush or in the swamp. Previously Maasai would spear elephants in retaliation for these deaths. In 1997 we instituted a consolation scheme to pay for cattle, sheep and goats killed by elephants and these payments have been very well received by the community. However, the program only applies to livestock killed outside the Park. For a few weeks in August there was an acute crisis when two cows were killed while grazing in the Park which resulted in the spearing of several elephants in the OB family. For awhile communications broke down between the Maasai and Kenya Wildlife Services. AERP's highly experienced team went into action and began to negotiate and try to calm tempers.

At the same time an election for the officers of the Maasai group ranch that surrounds most of Amboseli was taking place. A new chairman and a whole new set of committee members were elected. Daniel Leturesh, the chairman, is a very capable leader who also knows and appreciates the value of wildlife. He was quickly able to settle the problem and to our knowledge there have been no spearings since that time.

Daniel Leturesh (left), the new group ranch chairman, helping one of the elders with AERP's consolation form for receiving payment for a cow killed by an elephant.



In the meantime, the poor OB family suffered terribly. Two adult females, including the matriarch Odile, were speared as well as a young male and presumably the four-year-old calf of Odile, who was missing and never found. The immensely brave Odile tried to defend her family and in the process broke both of her tusks and was speared seven times. Two spears remained in her head.

One of AERP's directors, Harvey Croze happened to be in Amboseli on other duties. He flew a two-hour round trip to Tsavo East National Park to collect a KWS vet to treat Odile. Both spears were removed. One was imbedded two feet into her skull and was very difficult to extract. All her wounds were treated and she got up from the operation. The next day, when the rest of the family was found, another member, Ottoline, was treated for a very deep spear wound in her leg. The 11-year-old male Orok was not treated because his wound did not appear to be life-threatening. Miraculously, all have survived.

For the first time in several years two people were killed by elephants in the Amboseli area. One man was killed when he was walking at night and came upon a sleeping male elephant. The second man was run down by a bull who appeared to deliberately chase him in order to kill him. Both elephants were shot by KWS. The second bull, who was not from Amboseli, had a bullet lodged in his jaw. We think he was from Tanzania where he may have been shot at for crop raiding. As much as we hate to see elephants killed, we know that the policy of shooting individuals, who have killed people in the kinds of circumstances described above, is the correct one.

The deaths of the two men were terrible tragedies. It reminds us all the more that there are great costs for the Maasai in sharing their range with large, dangerous wild animals. One of our goals is to make sure the costs are reduced and that the benefits far outweigh the costs. It is a considerable challenge.

Training

Training courses aim to share the Amboseli Elephant Research Project's vast experience in approaching, observing and studying elephants with management practitioners and other researchers from countries with elephants throughout Africa. The courses are conducted concurrently with AERP's core elephant monitoring activities, so the trainees can see firsthand how the longest-running elephant study in the world operates in the field.

Since 1990, sponsored by Joe and Carol Reich's Pumpkin Foundation, the courses have been held from one to three times a year in the Amboseli ecosystem in southern Kenya. They are sanctioned by

the Kenya Wildlife Service and are organized and run by ATE/AERP research and support staff. Norah Njiraini takes the lead as AERP Training Coordinator.

In April 2004 we held a joint training course for Kenyan and Tanzanian Maasai research scouts whose job is to monitor elephant movements. The course was designed to take three days. There were thirteen students in all, seven from AERP and four from the West Kilimanjaro Project. In addition two project managers from Tanzania joined the scouts.

In June we did another training course for five students: one Ugandan who is doing a Ph.D. at Duke University and will be doing his field work somewhere in East Africa, possibly even at Amboseli, and two Kenyans, plus one of our scholarship students and one of our scouts.

In November a third course was held for three Kenyans: one who is working in the Shimba Hills Reserve, another from Tsavo National Park with the David Sheldrick Fund, and a third who is working part-time for AERP entering data onto our Amboseli-based computer database.

GLOBAL INFORMATION SYSTEM (GIS)

The Amboseli GIS has made great strides forward during 2004. We hired a very bright and dedicated young man, Peter Ndunda, to work on our maps and data sets under the direction of Harvey Croze. It all went very well and we now have sophisticated data layers with everything from park boundaries and roads to vegetation and elephant distribution. Peter left in September for the US to do a Masters Degree in GIS at Redlands University in California. This university is closely associated with ESRI the leading GIS software company and they have helped to get Peter a scholarship. As part of ATE's capacity building program we have paid for Peter's airfare to and from California and a portion of his tuition and room and board. We are confident that this support will prove to be money very well spent. When Peter completes his Ph.D. he will return to Kenya to work with us again.

Using the GIS tool box to combine data from aerial surveys, routine research sightings and data collected by the Maasai scouts we have been able to refine the elephant range within the Amboseli ecosystem and then use that information to help land-use planners make provision for corridors and buffer zones. Soila Sayialel has attended a series of cross-border meetings with participants from Kenya and Tanzania. With AERP's GIS information she was better able to explain the requirements for elephants to continue to migrate.

DIRECTOR'S ACTIVITIES

General

As always my activities span a great range. This last year has proved true to form. As the director I administer the project, oversee the research and attempt to raise the necessary funds. In Nairobi I run the Amboseli Trust for Elephants office, helped very ably by our Office Manager, Purity Waweru and ATE Trustee Harvey Croze. There we keep the accounts, deal with all aspects of personnel management, run the training and scholarship programs, maintain equipment and vehicles, purchase and send supplies to Amboseli, and in general act as a back-up for the field staff in Amboseli.

Research

In both Nairobi and Amboseli supervising the various research projects takes a good deal of my time. As Director of Research, Joyce Poole has helped tremendously in freeing up some of time, but I still need to make important decisions and correspond with the various Amboseli colleagues in the US and UK and with other elephant researchers. A large part of the research work at the present time

involves producing a book covering 30 years of our Amboseli elephant research. Harvey Croze and I are joint editors and I am writing or am contributing to 18 of the chapters. Writing these chapters is my most time-consuming activity. I'm pleased to report that the book has progressed tremendously over the last year. We now have most of the chapters in draft form and some have been completed and sent out for review. Our aim is to get it to the publisher sometime in 2005.

Conservation and Networking

One of the most important roles I play is networking with other elephant conservationists and advocates. These contacts range from researchers or managers working in Africa to people working for better conditions for captive elephants in the US and Europe.

While in the US, Betsy Swart (left) and I visited Carol Buckley (right) at the amazing Elephant Sanctuary in Tennessee. I greatly admire the work Carol and her partner Scott Blais are doing to give a comfortable, spacious home to old, unwanted and mistreated elephants (see www.elephants.com)



Public Awareness

The third in the films about Echo and her family has been completed. In between my other duties I worked in the field off and on with cameraman Martyn Colbeck from January to early May. The editing took place in Bristol, where the BBC Natural History Unit is headquartered, during June and July. In the meantime, working with the producer Mike Birkhead through e-mail, I wrote the script and later flew to England to record the narration. The film, which is called "Echo of the Elephants: the Final Chapter?" will be shown on the BBC2 on January 16 and in the US on the Discovery Channel later in the year.

Cynthia Moss
Director
December 2004