

The History of the RA Family

The RA family has always been a fascinating if frustrating group. To this day I am not sure if certain animals I have given "R" names to are really members of the RA or XA families. I'm also not sure which clan area the RAs should be assigned to. The only thing I can say with confidence is that the history of the RAs has not been clear and simple.

I first met the RAs' matriarch on the western side of the Park on October 5, 1973. A colleague and I were with the KA family, which was walking casually past the vehicle while I photographed them, when a left-tusked female with a five-year-old calf appeared and began demonstrating at the car. She charged, but carefully kept a large bush between herself and the car, indicating that she was not being seriously aggressive. After a couple of mock charges she peered at us from over the bush looking a little ridiculous with her one, short, left tusk. Her calf was frightened by her mother's nervousness. We managed to get some poor photographs of both of them on this day.



The first sighting of Remedios in October 1973; peering at us from behind a bush

I saw this left-tusked female two more times that October: one time on her own at the edge of a known group and another time in a large aggregation of over 50. I only saw her twice in 1974 (this was still during the time I was in Amboseli only part-time), again once on her own near a small group and then with a large herd. Fortunately, she was easy to recognize, but no grouping or ranging pattern was emerging. Of the five times I had seen her, she was on the west side of the Park three times and on the east twice. Even though I did not know much about her I assigned her the family letter code "R" and named her Remedios. (It was at that time that I was reading Gabriel Garcia Marquez's *One Hundred Years of Solitude* and I liked the names in his book.)

In August 1975 just before I began the full-time study, I found Remedios with a new calf about two months old. From this time on I saw Remedios regularly. She appeared to associate with a variety of animals but finally there seemed to be some consistency in the associations. Her own older calf, now seven years old, and three other young females were usually with her. I named these females Renata, Rachel and Ruth and Remedios's older calf was eventually named Rebecca.

On all the sightings for the remainder of 1975 and throughout 1976, Remedios and the other "R" females were almost invariably with the XA family, led by a big, handsome and powerful-looking female whom I named Xanthippe. The RAs also sometimes associated

closely with the IAs, led by one of the oldest females in the population, Isabel. I considered that these three families made up a bond group. I guessed that the RAs had only recently lost a large matriarch, around 1973 when I first met Remedios. This loss would account for the fragmentation of the family in the subsequent years. Remedios was only about 27 years old when I first met her. She was not yet of an age that would be able to hold a family together after the death of an old matriarch. I also suspected that the RA's former matriarch had strong bonds with the older matriarchs of the XA and IA families. Xanthippe was approximately 47 years old in 1973; Isabel was about 53.

The 1970s, up until the end of 1977, was a period of poaching of the Amboseli elephants. When they left the Park to go on wet season migrations, bulls and larger, older females were killed for their ivory. During 1976 the losses were very high. Not only was the poaching severe, but it was also a drought year. Over 60 elephants died that year. The RAs did not fair badly. Remedios, herself, was not a prize target for a poacher since she only had one tusk, and the other females in the group were young with very light ivory. All these females survived, but Remedios's calf born in 1975 died in November 1976. By the end of 1976 I thought I had a fairly good idea who was in the RA family, who they formed a bond group with, and which clan area they belonged to. The family looked like this:

Remedios--about 30 years old Rebecca--her 8-year-old daughter Renata--about 13 years old Rachel--about 21 years old Ruth--about 16 years old R's Keyhole--a young male about 7 years old

R's Keyhole had this peculiar name because he had a keyhole-shaped cut out of the bottom of his right ear. Another calf named simply Keyhole belonged to the EA family, thus the other one became the R's Keyhole.

My confidence about the structure of the RA family did not last for long. Several events conspired against the neatness of the membership list I devised. First, Xanthippe disappeared in October 1976, almost certainly poached, leaving an uncounted and unphotographed number of juvenile females in her family. Second, Isabel and Irene of the IAs died in 1977 leaving a small group behind with no adult females. And third, the next oldest female in the XAs, Xaviera disappeared in September 1977. This left many disturbed, confused and leaderless youngsters around. Both families fragmented and various individuals appeared with the RAs from time to time. Since most of the ones less than 10 years old had not been photographed I never knew if they were from the IA or XA family or whether they were just RA youngsters that I had not yet identified.

Eventually I identified all the individuals in the three families and gave them names, but I have never been altogether happy with my designations. (Fortunately, there are only three other families that I have had similar problems with. With 62 family units in the Amboseli population, I would be tearing my hair out if they were all like the RA/XA/IA bond group.) Three young females were given R names: Raphaella, Riva and Risa. Others were given X and I names based on whom they associated with most of the time. The RAs



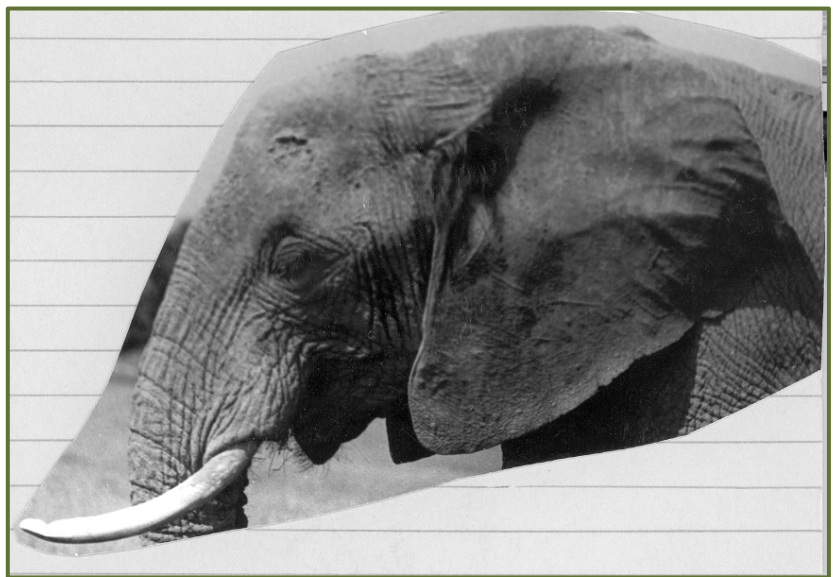
Risa's ID photo; with the big tear in her ear she was easy to recognize

and XAs remained closely bonded, but the remnant of the IA family led by Iris did not associate closely with them after the death of Isabel and eventually she teamed up with a completely unknown young female who to this day is known only as "Three Holes Right". I have no idea what family she came from!

I had thought the RAs belonged to a clan that used the western part of the Park, but gradually they seemed to spend more time in the central OI Tukai woodlands and in the eastern Longinye Swamp. The IAs tended to remain in the west, while the XAs joined the RAs in the east. I believe they actually changed their clan area after 1977, which was an unusual move.

By 1978 I had identified all the families in the population and could recognize all the adult females and most of the juveniles in those families. There were very few young calves, but after a period of very little reproductive activity Amboseli experienced an elephant baby boom in 1979 and 1980. The RAs were no exception. In June 1979 Remedios gave birth to a male calf; in February 1980 Ruth had a son; and much to my surprise, Remedios's 12-year-old daughter, Rebecca, gave birth in April 1980 to yet another male. Rebecca was the youngest female to give birth that I had recorded up until then. Both Remedios's and Rebecca's calves were included in a special study I did on the development and behavior of calves.

Sadly, there was also a loss in 1979. Rachel broke her leg under unknown circumstances, and although she lived for a while, eventually she could no longer walk at all and she died a slow and painful death. We have several records of calves breaking their legs but this is the only record we have for an adult. A postmortem examination showed a complete break of the femur. It also showed that she was pregnant with a near-term fetus.



Rebecca's ID photo

In the meantime, the other young RA females were reaching sexual maturity, coming into oestrus, mating, and conceiving. Renata mated in 1979 and gave birth to a male calf in April 1981. I photographed Raphaella in oestrus on April 7 and 8, 1980. At that time Raphaella was only 11 years old. She gave birth to a female calf two years later in April 1982.

Over the years 1979-83 the RAs fared well along with the other elephants in Amboseli. It was a time of high rainfall and thus abundant vegetation. Many more calves were born, but there were also a few losses. Rebecca lost her 1980 calf when it was a year old; R's Keyhole went independent in 1980; Raphaella lost her '82 calf when it was seven months old; and Ruth lost her '83 calf when it was only two months old. It is not unusual for females to lose their first-born calves as all these were. Remedios and Rebecca each had another calf in 1983, and by the end of 1983, despite the losses, the family had grown considerably from the small group of six I had first worked out in 1976 to 12 members. The family structure and composition was as follows:

Individual	Sex	Estimated or Known Month & Year of Birth
Remedios	F	1946
REM83	M	6-83
Raoul	M	6-79
Rebecca	F	1968
REB83	M	3-83
Ruth	F	1960
Rex	M	2-80
Renata	F	1963
REN81	M	4-81
Raphaella	F	1969
Riva	F	1969
Risa	F	1970

In 1984 there was a serious drought in Amboseli and many elephants died from lack of food and from spearing by the Maasai whose cattle were in conflict with the elephants for the limited resources. The RAs did not do as badly as some families. Sadly, both Ruth and Riva died in July 1984 and Remedios's '83 calf and Ruth's '80 calf, Rex, died in September 1984 at the height of the drought. Even though Rex did not need his mother's milk for survival at four years old, he died only two months after his mother did.

Fortunately, adequate rains came in 1985 and conditions improved for the all the wildlife and the Maasai. Three of the RA females had calves that year. The first was Renata who gave birth to a male calf in January. In February Raphaella produced a male calf and in April Risa had her first calf, a male. The RA family seemed to have a preponderance of male calves. The actual sex ratio at birth for the Amboseli population is 1:1, but up until 1994 the RAs had fourteen male calves and only five females since the study began.

Over the next few years there was little change in the family. Rainfall was relatively high for Amboseli and there was no poaching and very few incidents of spearing by the Maasai. Remedios had a calf in February 1989, a male, of course. Rebecca and Raphaela each had male calves in 1990, but Raphaela's calf died when he was only a few weeks old.

Finally in 1991 two females were born to the RAs: in April Risa gave birth to a daughter; and in September Renata had a female calf. At the time of their births there was only one other female calf in the family: Rusinga, Rebecca's 1987 calf. She had her work cut out for her with the new babies. Juvenile females spend a great deal of time taking care of the younger calves. Usually there will be several of these "allomothers", as they are called, to share the work, but Rusinga had the full burden. Eventually when the 1991 females were older they were able to help her out.

Risa's daughter was named Ramulosa and Renata's was called Ruellia. Both these names were taken from plants that grow in the Amboseli area. We began to run out of normal first names and decided to start using themes for naming the calves born in a single year. Thus the 1987 calves were given place names in East Africa, 1991 were plants, and 1992 were rivers in Africa. Other years we used Indian names or Biblical names. It's always a challenge.



Magnificent Ramon in musth in September 2011

moving at the periphery of the family, then they may go away for a day or so before returning to the immense security and protection that the family provides. Eventually, the pull to be out with the other males seems to win out and they leave for good. Others just seem to leave from one day to the next. We have had a few "Mama's boys" who have stayed with their mothers until they were 18 or 19.

Between 1991 and 1998, the RAs produced four females and two males thus alleviating some of the "gender bias". In 1992 and 1997 Raphaela gave birth to daughters; in 1994 both Remedios and Rebecca had female calves; in 1995 Risa had a male; and in April 1996 Renata had another son. In the meantime, two of the young males in the family, Raoul and Ramon, had gone independent.

Young males leave their families at the average age of 14. For some it's a slow transition. They start by

With the departure of the two young males the RAs numbered 19 at the end of 1997:

Individual	Sex	Estimated or Known Month & Year of Birth
Remedios	F	1946
REM94	F	4-94
Roy	M	2-89
Rebecca	F	1968
REB94	F	4-94
Rusinga	F	5-87
Rosario	M	3-83
Renata	F	1963
REN96	M	4-96
Ruellia	F	9-91
Ramsay	M	1-85
Raphaela	F	1969
RAP97	F	2-97
Russo	F	6-92
Russell	M	2-85
Risa	F	1970
RIS95	M	2-95
Ramulosa	F	4-91
Regan	M	5-85

The RAs could definitely be considered a successful family. In 1998, like the rest of Kenya, the park received a huge amount of rain courtesy of *El Nino*. There was a super-abundance of food and the all the elephants grew positively fat on the lush vegetation. The elephants formed huge aggregations of 200-300 and there was a tremendous amount of play. Even the big adult females lost their dignity and ran around with the whites of their eyes showing attacking imaginary enemies in the long grass. It would be wonderful if it could always be like that, but nothing is predictable in African savannahs.

Towards the end of 1999 we began to see the results of *El Nino*. Baby elephants seemed to be raining from the sky. Up through October 1999 there were 63 births, which was expected, but in November and December we suddenly had a deluge of new calves. These were conceived 22 months before, starting in January 1998 when the *El Nino* rains were well underway and the elephants were in the best possible condition to breed. In the last two months of 1999 alone 48 more calves were born giving us an all-time record of 111 births for one year.

The RAs joined this *El Nino* boom. Risa was the first with a new female calf born in November 1999. Five more calves followed. Rusinga, Rebecca's 12-year-old daughter, gave birth to her first calf, a male, in December, making Remedios a great grandmother. Then the first Amboseli calf of the new millennium was recorded on January 1, 2000—it was a daughter born early that morning to Remedios. Renata had a female in March; Rebecca gave birth to a son in September; and Raphaela had a daughter in October. In

the meantime, four more young males left to strike out on their own—Ramsay, Russell, Regan and Rosario.

It was a tough year to leave, because in 2000 Amboseli experienced a terrible drought. At times like this the Maasai and the elephants are competing for the same meager resources, tempers become short, and conflicts occur. Fifteen elephants were speared and nine of them died before the drought ended in December. However, the RAs, under the wise leadership of Remedios, avoided the Maasai and came through the drought unscathed. All the calves survived.



Remedios, Rebecca and their calves in November 2008; this was the last photo taken of the RAs' wise old matriarch

Life was relatively good for the RAs over the next years. There were no additions to the family during 2001 and 2002 but three calves were born in each of the following years making nine new calves in all. Nevertheless, there were some unexplained losses in 2005. Raphaela, her daughter Russo and their two youngest calves disappeared. We suspect the two adults were speared but we don't know. Their carcasses were never found. The following year in 2006, Remedios's one-year-old calf died, which was a mystery. Five calves were born in 2007 and only one of these died. Another three were born in 2008. One of these calves was born to Remedios, but it died within a month. Perhaps at 62 years

old she was reaching the end of her reproductive life. By the end of 2008 the RA family was large and thriving with 27 members:

Individual	Sex	Estimated or Known Month & Year of Birth
Remedios	F	1946
Random	F	1-00
Rehab	F	4-94
Rebecca	F	1968
REB08	M	3-08
Roberto	M	4-04
Ridder	M	9-00
Rena	F	4-94
RNA05	F	5-05
Rusinga	F	5-87
Reed	M	2-04
Rush	M	12-99
Renata	F	1963
Roxy	F	3-03
Riley	M	3-00
Ruellia	F	9-91
Rosie	F	2-07
Risa	F	1970
RIS07	F	3-07
Rona	F	3-03
RuthII	F	11-99
Randy	M	2-95
Ramulosa	F	4-91
RML08	F	6-08
Robert DeNiro	M	8-03
Reboot (m. Raphaela)	F	12-00
Rawlings (m. Raphaela)	F	2-97

The good times didn't last for long, however. In 2009 Amboseli experienced the worst drought in living memory. By the end of that year 83% of the wildebeests, 71% of the zebras, and 61% of the buffaloes had died. Close to 400 elephants perished from both the drought and an upsurge in poaching. The problem was that there was almost no vegetation left to eat. Amboseli always had fresh water because of the underground rivers coming from Kilimanjaro. These rivers create permanent swamps in the Park, so the animals did not die of thirst but rather from hunger. In addition, in the case of the elephants, as they weakened they appear to succumb to disease as well.

The calves were the first to go. There was nothing for them to eat and their mothers' could not produce enough milk for them, especially as the calves got older. In 2008, 151 calves were born, which was a new record. However, the next year these calves were just at the

age when they needed to supplement milk with vegetation and there simply wasn't anything they could eat. As a result 97 of them died during 2009. The calves born during 2009 also suffered but they did a bit better because they didn't have to eat as much vegetation. Of the 85 calves born during the drought 38 died. The RA family did better than most; they only lost six calves over the drought period.

However, the RAs suffered the greatest loss possible. Their matriarch Remedios died, as did all but two of the females over 50 years old. Over half of the matriarchs died seriously disrupting their families. The drought coincided with a period of increased poaching around Amboseli, and we could not be sure whether Remedios and these other adult females died as a result of the drought, or at the hands of poachers. In any case, the RA family had lost their leader at one of the most difficult times possible. However, Renata, Rebecca and Risa were all big, experienced females by this time, and they helped provide some stability.

The drought broke in December and fairly good rain fell in 2010. African savannahs are remarkable in being able to recover quickly. Within a couple of months the woodlands and plains were transformed from what looked like bare soil to lush green swards. It always amazes me. Underneath that dusty ground the seeds and roots remain waiting for the moisture to release them.



Beautiful Renata took over as matriarch in 2009: she carried her calf Rafiki throughout the drought and she is a fat healthy calf now

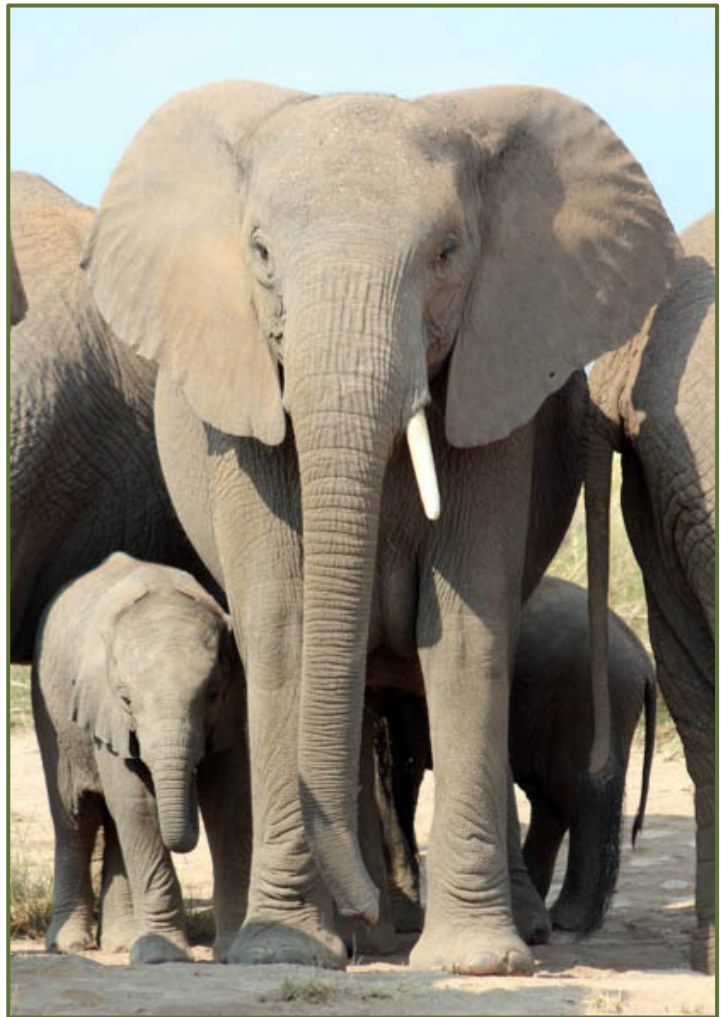
Slowly the elephants began to recover. They put on weight and there was a spring in their step. The ATE team had their work cut out for them trying to discover who had died, who had survived, and who all the orphans were. It took almost a year to figure it all out. Poaching had been brought under control once more, and we felt more confident for the elephants. They got into huge groups to enjoy the lush new grass and many females came into oestrus.

Remarkably, Renata had given birth to a female calf in December 2009, which meant she had carried that calf through the worst of the drought. However, no more calves were born to the RA family for another two more years. The females simply had not been in good enough condition to conceive, but once they had enough to eat they did their best to make up for lost time. Twenty-two months after the drought broke, a record baby boom began in Amboseli. If in 1999 we had thought there were baby elephants raining from the

sky, this was a deluge. Now as I write this history, we have documented 224 births since the first female gave birth on October 12, 2011.

Females in the RA family were some of the first to have calves. Rebecca's daughter Rena and Risa daughter Ramulosa gave birth to male calves in December 2011. Five more calves have followed so far in 2012, born to Rusinga, Ruellia, Risa, Rebecca and Rehab. These calves are lucky to be born in a very good rainfall year, and they're thriving. They don't have many older female siblings to help take care of them, but Rona, Retsina and Rafiki are working overtime as allomothers.

Renata as the oldest has taken over as matriarch with help from Rebecca. Risa tends to move separately with her and Raphaela's offspring but they do spend time with Renata and the others as well. We think in time they will form two separate families. Their link with the XA family seems to have weakened but we saw Risa with the what is left of the XAs after the drought. A young female named Xahra now leads them.



Remedios's granddaughter Rena inherited her one-tuskedness; her baby boom calf was born in November 2011

'R' seems to be a very popular letter for our Naming Program. Almost all the RA calves, especially the males, have been named by donors over the years; among the present RA baby boom calves five have already been named: Rowland, Ruscha, Richter, Rea and Rafiki.

The RAs have produced many successful male calves who have grown up and become independent. Sadly one of the largest, R's Keyhole, has disappeared and is feared dead, but there are eight others out in the world of the big bulls and some of the older ones have been seen regularly in musth and mating with females. Two of the most active are Ramon and Rosario, so we know that the RA genes are being passed on through the male line as well as the female.

The current structure and composition of the RA family is as follows, including adult independent males:

Individual	Sex	Estimated Year or Known Date of Birth	Mother
Renata	F	1963	?
Rafiki	F	12-09	
Riley	M	3-00	
Ruellia	F	9-91	
RUE12	M	1-12	
Rebecca	F	1968	Remedios
Ruscha	M	2-12	
Roberto	M	4-04	
Ridder	M	9-00	
Rena	F	4-94	
Rowland	M	12-11	
Rusinga	F	5-87	
RUS12	F	8-12	
Reed	M	2-04	
Rush	M	12-99	
Rehab	F	4-94	Remedios
REH12	F	3-12	
Random	F	1-00	Remedios
Risa	F	1970	?
Rea	F	1-12	
Retsina	F	3-07	
Rona	F	3-03	
Ruth II	F	11-99	
Ramulosa	F	4-91	
Richter	M	12-11	
Robert DeNiro	M	8-03	
Rawlings	F	2-97	Raphaela
Reboot	F	12-00	Raphaela
Independent Males	Male Code		
Raoul	312	6-79	Remedios
Ramon	346	4-81	Renata
Rosario	386	3-83	Rebecca
Ramsay	417	1-85	Renata
Russell	418	2-85	Raphaela
Regan	419	5-85	Risa
Roy	480	2-89	Remedios
Randy	604	2-95	Risa

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