

The History of the PC and PC2 Families

The PC and PC2 families have had an unusual history. Up until 1982 the PCs were part of the PAs, which was the largest family in the Amboseli population. The Ps, as they were always called, were a magnificent family when my colleague, Harvey Croze, and I first saw them in October 1973. There were so many big adult females that it was all we could do to just photograph them on that day. Two months later a friend went to Amboseli and took several rolls of film of a big group of elephants and turned the film over to us. Most of the group consisted of the Ps and the new photos helped us sort out the various females and their calves. However, it was not until 1975 and 1976 that I got to know them well.



Phoebe's ID photo

When I began to live in the Park in September 1975 I knew the Ps contained at least six big females and two teenage females. All these animals had been named. We decided that Penelope was the matriarch because she usually led the group and the others seemed to orient towards her. The next largest was a left one-tusked animal we called Phoebe; the four medium-sized females were named Philomena, Patricia, Phyllis and Polly, and the teenagers were called Pick (Phoebe's daughter who had a funny little right tusk) and Pamela

(Philomena's daughter).

One day I was out in the Park and found what I thought was a completely new group. I photographed them, assigned them the letter "Z" and named the two adult females who were present Zoya and Zelda. Over the next months Zelda was found with the Ps on almost every sighting, so I decided I had made a mistake and renamed her Priscilla. She was the seventh adult female in the Ps.

Around this time it became obvious that there was an eighth female who seemed to be a member of the Ps. By that time I had run out of inspiration

for P names and so I named this one Octavia because she was the eighth. Eventually I decided that Zoya also belonged to the Ps but tended to split off from the main group. She kept her name, and thus the Ps ended up with two anomalies in the family: Zoya and Octavia. It has sometimes been difficult to explain why there are Z and O females in the Ps, but it seems natural to me and it's far too late to change their names in any case.

By the end of 1975 when I had finally sorted out all the members in the Ps, the family consisted of 22 animals of which nine were adult females. This was the largest group in the population. The average family unit size at that time was only seven. Despite their large size, the family was usually all together but sometimes I would find it split into sub-units. It consisted of the following individuals:

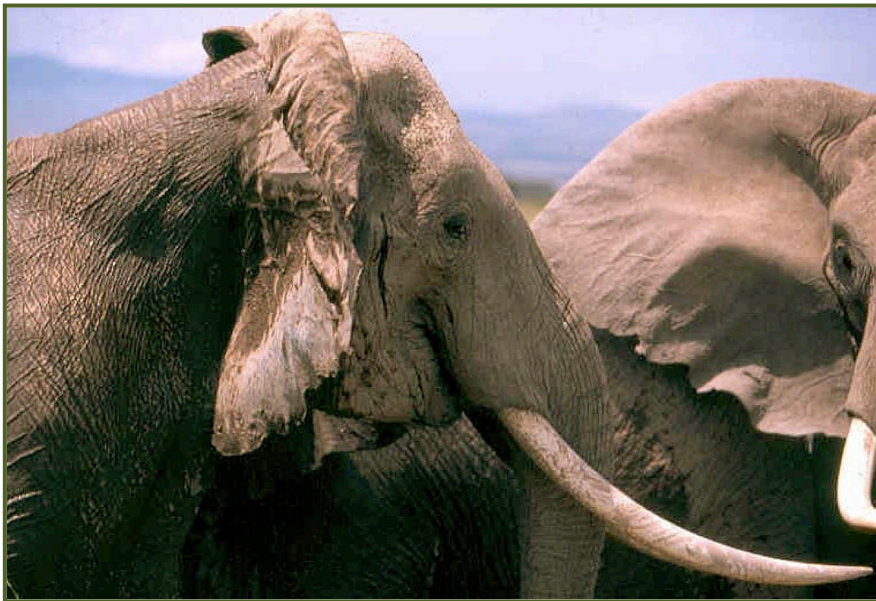


The wonderful Pick who disapproved of vehicles

| Individual | Sex | Estimated or Known Date of Birth |
|------------|-----|----------------------------------|
| Penelope | F | 1938 |
| PEN73 | M | 1973 |
| Phoebe | F | 1938 |
| PHO75 | M | Oct-75 |
| Pilar | F | 1968 |
| Pick | F | 1964 |
| Zoya | F | 1941 |
| ZOY74 | M | 1974 |
| Patricia | F | 1942 |
| Pepita | F | 1968 |
| Phyllis | F | 1959 |

| | | |
|---------------|---|------|
| Philomena | F | 1943 |
| PHI73 | F | 1973 |
| Phil's Wedge | M | 1968 |
| Pamela | F | 1963 |
| Priscilla | F | 1943 |
| PRI70 | F | 1970 |
| Polly | F | 1948 |
| Octavia | F | 1948 |
| Paul M77 | M | 1961 |
| Polythene M76 | M | 1964 |

Just as I was getting to know the Ps and the other families in Amboseli, the Park and surrounding ecosystem experienced a serious drought. In 1975 there had been low rainfall and in 1976 the rains failed with only a miserly couple of inches falling during what was supposed to be the wet season. There was a brief flush of green in April and May and then the drought set in. During that year only two females gave birth: Patricia and Phyllis. It was a bad year to be born in Amboseli. I recorded the births of 29 calves in the population. By the end of the year only 15 remained. Of those that



Philomena (left) and Penelope greeting with an intense display of emotion; they were always very close

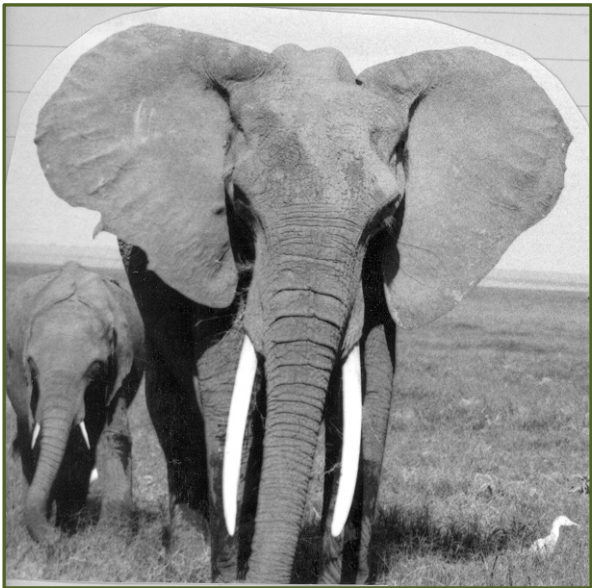
died most were probably the victims of drought.

It was sad and depressing watching these calves get weaker and weaker and then disappear. Their mothers had milk but probably not in great quantity or quality. What really seemed to affect the calves was the lack of suitable

vegetation to feed on once they reached the age when they should have started to eat solid food. Calves start to eat a bit of grass when they are between three and four months old, and by the time they are eight months old they need quite a lot of food to sustain them. In 1976 as the drought progressed there was only swamp vegetation which the young calves had

difficulty both handling and digesting. Many of the calves that had been born in the early part of the year died in September, October and November. Phyllis lost her calf in October. Patricia's calf lived.

Finally rains came in December and the elephants, adults and calves, gradually recovered. The next three years proved to be very favorable ones for the elephants. The rainfall was higher than average with the result that there was abundant and nutritious vegetation. In addition the poaching that had occurred in the areas surrounding the Park came to end in 1977; and in 1978 the Maasai warriors were promoted to junior elder, and with that change the incidents of spearing of elephants decreased dramatically. All in all it was a very peaceful and productive period for the elephants.



Phyllis with one of her many calves

During the drought the females had stopped reproductive cycling altogether. However, as soon as conditions improved they began to come into oestrus again and mate. Since so few of them had young calves there were many females ready to conceive. The result was a baby boom in 1979 and 1980. Only two calves had been born to the Amboseli population between January 1977 and November 1978. From November 25, 1978 to June 5, 1980, one hundred calves were born. At times it seemed like babies were falling out of the sky.

The Ps joined the boom with enthusiasm, producing nine calves during that period. In 1979 Priscilla and Polly had daughters; and Philomena, Pick and Phyllis had sons. In 1980 daughters were born to Penelope and Zoya; and sons were born to Phoebe and Patricia.

Over the next three years they grew to 29 animals. By this time they were beginning to split up more often, but there did not seem to be much consistency in the splits. Patricia and Phyllis and their calves tended to be with Phoebe or by themselves; Philomena, Zoya, Octavia and the others were usually with Penelope but not always. Eventually some sort of elephantine decision was made and the Ps basically split in two. By the beginning of 1983 there were two clear-cut families: 16 animals formed a family led by Penelope, which continued to be designated the PAs; and 13

individuals lined up behind Phoebe and they became the PCs. Nevertheless, the two families still spent more time with each other than with any other families in the population; when they met they performed a greeting ceremony; and when they were together they moved in a coordinated way. In other words, these two families formed a bond group. At the time of the split the PC family consisted of the following 13 members:

| Individual | Sex | Estimated or Known Date of Birth |
|------------|-----|----------------------------------|
| Phoebe | F | 1938 |
| Pierre | M | Jan-80 |
| Paddy | M | Oct-75 |
| Pilar | F | 1968 |
| Placida | F | Oct-82 |
| Pick | F | 1964 |
| Paolo | M | Nov-79 |
| Patricia | F | 1942 |
| Pascal | M | Jan-80 |
| Pandora | F | Mar-76 |
| Pepita | F | 1968 |
| Phyllis | F | 1959 |
| Pinocchio | M | Mar-79 |

Phoebe did well as a matriarch after the split. Her family grew and flourished over the years. Phyllis was a particularly fertile female. She lost her first calf in 1976, but then gave birth to a male calf in 1979 and he survived. She gave birth again exactly four years later to a female who was eventually named PLee after my colleague Phyllis Lee. We pronounce it Pili like the hot pepper *pili pili*. Then Phyllis (the elephant) gave birth to another calf in record time after only a two-years and 10-months calving interval (the usual is four-five years). We're happy to have births but at this rate the population in Amboseli would skyrocket. Fortunately, not many other females in Amboseli followed Phyllis's poor family planning example.

Conditions continued to be good for the Amboseli elephants for the next couple of years. Many of the females who had given birth in 1979 gave birth again in 1983. The population was growing rapidly. However, environmental conditions changed once again. In 1984 there was a severe drought. Many elephants died that year, both directly from lack of food and through human-elephant conflict. In times of drought the Maasai and their cattle and the elephants and other wildlife all concentrate around the central Amboseli swamps and are basically on top of each other. Under

these conditions competition and conflicts occur. Elephants sometimes kill cows that they come upon and are frightened of because they are associated with man, and then in retaliation the Maasai spear elephants. To aggravate matters in 1984 the Maasai had promoted a new warrior set and the combination of the drought and scores of young men out to prove their bravery was devastating for the elephants. In all 67 elephants died during 1984: 11 adult females, 13 adult males, three juveniles, 13 weanlings, five second-year calves, and 22 first year calves. However, under the wise leadership of Phoebe the PCs came away remarkably unscathed.

The drought broke at the end of 1984 and a relatively peaceful period followed right up to the 90s. The PC family grew with all the females giving birth approximately every four years except for Phyllis who still churned out calves faster than anyone else. In the meantime, calves grew up and males left the family at around 14 years old to strike out on their own, while young females stayed in the family and began having their first calves at anywhere from 11-14 years old. By 1993 most of the PC baby boom



Peggy's son Palmer, born in 1994, grew up to be one of our favorite bulls because of his gentle disposition and friendship with families

calves, who happened to all be males, had matured: Pierre, Paolo, Pascal and Pinocchio left to become independent males. They were sexually mature but they would have to wait until they were about 30 years old before they had a hope of mating with females. In the meantime, they were making friends with other males, practicing their fighting skills, and learning who was dominant or subordinate to them.

By the end of 1993 the PC family had grown to 20 even after the departure of the four young males. During 1994 four more calves were born. Pilar gave birth to a female in March; Peggy had

her first calf in September; and in December both Phoebe and Patricia produced big, healthy sons.

By the end of 1994 the two families were well and truly split, and only rarely associated with each other anymore. The PA family was still led by the magnificent Penelope and one-tusked Phoebe led the PCs. The PCs continued to grow over the next three years with three more calves born. In 1997 the family numbered 28, almost the size the original Ps were when they split 15 years before. It consisted of the following:

| Individual | Sex | Estimated or Known Date of Birth |
|------------|-----|----------------------------------|
| Phoebe | F | 1938 |
| PHO94 | M | Dec-94 |
| Pal | M | Apr-89 |
| Peggy | F | May-83 |
| PEG94 | M | Sep-94 |
| Pierre | M | Jan-80 |
| Paddy | M | Oct-75 |
| Pilar | F | 1968 |
| PIL94 | F | Mar-94 |
| Pat Shange | M | Nov-88 |
| Placida | F | Oct-82 |
| Pick | F | 1964 |
| PIC96 | F | Feb-96 |
| Periwinkle | F | Dec-91 |
| Plato | M | Apr-86 |
| Paolo | M | Nov-79 |
| Patricia | F | 1942 |
| PAT94 | M | Dec-94 |
| Pran | M | Dec-90 |
| Pemba | F | Jan-87 |
| Pascal | M | Jan-80 |
| Pandora | F | Mar-76 |
| Pepita | F | 1968 |
| Phyllis | F | 1959 |
| PHY97 | F | Jan-97 |
| PHY93 | F | Nov-93 |
| Priya | F | Feb-90 |
| Petula | F | Jan-86 |
| Plee | F | Mar-83 |
| Pinocchio | M | Mar-79 |

We were now beginning to see a second split. Sometimes Patricia, Phyllis and Pepita went off with just their calves, while Phoebe, Pick and Pilar formed a group with their calves.

The next 12 years in the life of the PCs was relatively peaceful and secure: 16 more calves were born to the Phoebe-Pick subgroup and 13 more calves were born to the Patricia-Phyllis subgroup. Unfortunately, there were also some profound losses. In 1997 Patricia's 10-year-old daughter Pemba was speared and died. In 2000 Amboseli experienced a drought, which caused the deaths of many calves in the population. The PCs lost four calves.

In 2001 the killing of elephants for ivory raised its ugly head again. Patricia, who had beautiful large tusks, was poached and her youngest calf died at the same time. Then in 2004 Phyllis died of natural causes. She had been ill for some time, but we did not know from what. Pepita died in 2005 and her death was also attributed to poaching.



Plee became leader of the PC2s at the young age of 22

By 2005 the PC family had split with Phoebe leading one part and Plee leading what we now called the PC2s. This arrangement seemed to suit both subgroups and it looked like they would recover from the losses, but then nature dealt a dreadful hand to everyone in Amboseli.

Not enough rain fell for two years in a row and then in the third year, 2009, there was barely any rain at all. Amboseli experienced the worst drought in living memory. People, livestock and wildlife all suffered. Eighty percent of the cattle died; 83% of the wildebeest, 71% of the zebras and 61% of the buffaloes perished. More than 400 elephants died from the drought and an upsurge of poaching.

The PCs and PC2s were hard hit. Phoebe, Pick, Pilar, Peggy in the PCs died, while Plee and Priya in the PC2s died. We suspected the older ones were

poached for their large tusks. In addition five calves in each family perished.

Plee had been the matriarch of the PC2s for only five years. The next oldest female was her sister Petula who was 23 in 2009 and forced to take over. In the PC family Placida, daughter of Pilar, granddaughter of Phoebe, became matriarch at 27. Both families were greatly reduced in size and were vulnerable through lack of experienced leadership. We worried about their ability to recover from such drastic losses.

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. Underneath that dusty ground the seeds and roots remain waiting for the moisture to release them.

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 be able to figure it all out.



Beautiful Petula who looks so much like her mother Phyllis

In the meantime, it didn't take the females long to recover enough to start breeding again. Already in January and February 2010 we recorded females in oestrus. With a 22-month gestation period we expected to start finding new calves in November 2011 and we did. There were actually two births in October, so those females were surprisingly early. More calves came in November and December: a total of 49, and then in 2012 there was a deluge of calves, another 201!



The PC2 family females helping Petula's newborn to his feet

We didn't know how the two PC families were going to fare, but the new leader of the PC2s Petula surprised us with a calf in November 2011. We were very happy to see that she had recovered so quickly after the drought. She had a son. Two more calves were born to the family in 2012, to Pleiades and Pink, and one in 2014, to Piedad. Pleiades' calf died when it was less than a month old, but she lost no time and was soon pregnant again and gave birth to a son in March 2015. In 2016 Petula and Pink had calves, both daughters.

The PCs also began to have calves after the drought: Patience had a daughter in May 2012, and Periwinkle had a son in January 2014. Two more calves were born in 2015, daughters to Pauleta and Patience. In 2018 Periwinkle had a female and Paris made Placida a grandmother for the first time with a male calf.

In the meantime, the males from the three P families continue to do remarkably well. Once males leave their families at around 14 years old their

survivorship rates are much lower than for females who have stayed in the security of the family. Males tend to take risks and go to areas that are dangerous. In addition, their tusks are heavier than those of females and so they are more likely to get poached. Nevertheless, the P males have grown into magnificent bulls who are mating with females and fathering calves. From the original PA family there are 13 independent males; the PCs also have thirteen; and the PC2s have three making 29 bulls with the P genes.



Pick's son Paolo grew up to be a magnificent bull

We have recently seen the PCs and PC2s together on several occasions. We are hoping that they might reform as one family. The PCs number 12 and the PC2s number 10. Both have four adult females. Even if they don't amalgamate they will be fine and will soon build up their numbers with four breeding females each.

Cynthia Moss
Amboseli
June 2019

Structure & Composition of the PC and PC2 Families
June 2019

| Individual | Sex | Estimated or Known Date of Birth | Mother if Dead {Grandmother} |
|--------------------------|-------------|----------------------------------|------------------------------|
| PC | | | |
| Placida | F | Oct-82 | Pilar {Phoebe} |
| Pheebbs | F | Dec-14 | |
| Paris | F | May-03 | |
| PRS18 | M | May-18 | |
| Pauleta | F | Nov-02 | Pilar {Phoebe} |
| Peronell | F | Mar-15 | |
| Patience | F | Apr-99 | Pilar {Phoebe} |
| Pelkha | F | Nov-15 | |
| Pilapila | F | May-12 | |
| Periwinkle | F | Dec-91 | Pick |
| PWK18 | F | Feb-18 | |
| Pilau | M | Jan-14 | |
| | | | |
| PC2 | | | |
| Petula | F | Jan-86 | Phyllis {Patricia} |
| PEU16 | F | Feb-16 | |
| Patricio | M | Nov-11 | |
| Pink | F | Feb-96 | Plee {Phyllis} |
| PNK16 | F | Mar-16 | |
| Pero | M | Jan-12 | |
| Pleiades | F | Apr-95 | Pepita {Patricia} |
| Photius | M | Mar-15 | |
| Piedad | F | Nov-99 | Pepita {Patricia} |
| Pasheni | F | Jun-14 | |
| | | | |
| Independent Males | Code | Birthdate | Mother |
| Paolo | 356 | Nov-79 | Pick |
| Pascal | 331 | Jan-80 | Patricia |
| Pierre | 330 | Jan-80 | Phoebe |
| Primo | 399 | Mar-84 | Pepita {Patricia} |
| Plato | 425 | Apr-86 | Pick |
| Pat Shange | 467 | Nov-88 | Pilar {Phoebe} |
| Pal | 479 | Apr-89 | Phoebe |
| Pushkar | 499 | Dec-90 | Pepita {Patricia} |
| Payne | 569 | Dec-94 | Patricia |
| Philip | 567 | Dec-94 | Phoebe |

| | | | |
|---------|-----|--------|-------------------|
| Palmer | 568 | Sep-94 | Peggy {Phoebe} |
| PBear | 651 | Mar-98 | Pilar {Phoebe} |
| Petter | 691 | Dec-99 | Phyllis {Phyllis} |
| Pereira | 792 | Oct-02 | Peggy {Phoebe} |
| Parker | 824 | Mar-03 | Petula {Phyllis} |
| Presley | 826 | Feb-03 | Plee {Phyllis} |