

Lost Possum Babies

An Alternative to Hand Rearing?

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Ulrike Beckmann was born in Berlin, Germany, in 1963 and graduated in Veterinary Sciences at Ludwig-Maximilian-University Munich, Germany in 1989. In 1991 she completed her thesis and worked at the Institute for Microinvasive Surgery at Technical University, Munich. During 1991 she also travelled extensively and worked with wildlife in southern Africa.

From 1992 until 2005, she worked as an Animal Nutritionist and Marketing Manager at Waltham Centre for Animal Nutrition (Pedigree Pet Foods) in Germany and Great Britain, raised three children, worked from home writing articles for pet magazines, and translating for veterinary magazines.

In 2005 she returned to work in small animal practice, in Munich before moving with her family to Melbourne, Australia, on her husband's working contract.

Since 2006 she has been involved in voluntary work for Victorian Dog Rescue Group and wildlife care.

Her hobbies are primates (incl. my family), animal behaviour, wildlife especially bird watching, running, hiking, and reading.

Introduction

Every year hundreds of juvenile possums get lost throughout Victoria. They get run over by cars, die from injuries or just starve to death. Many get picked up by people and are brought into vet clinics/wildlife shelters where they get passed on to wildlife carers. These carers devote countless hours to hand raising those sucklings which takes many months to complete and represents a major commitment for all involved. The adolescent possums will then be released into a rather hostile environment that can make a survival questionable. It is widely assumed that most of these lost babies are orphaned which means the mother has been killed or has abandoned them.

According to this study there might be an alternative by tracking down the mothers and reuniting them with their lost young.

Case Studies

The first case - a coincidence:

A Ring Tail Possum baby was found under a tree at a local school during school hours where an adult female could be seen sitting on a higher branch watching. The adult female would not come down to pick the baby up for hours even when there was no human in sight. The same night the baby was brought back to the tree and after the baby let out a distinctive call the female moved towards it and after a quick check let it climb onto her neck and then her back. After climbing up a few metres the female started cleaning and grooming the baby and later went further up to feed.

Encouraged by this case I tried the same procedure whenever I received a Ringtail Possum baby that came with a good description of the location where it was found.

During the following months I was able to repeat this procedure successfully several times.

Provided the possum baby was healthy, within the appropriate weight range and able to call the reunion was successful in most cases.

In case there was no adult female possum to be seen during the session or weather conditions did not allow possum calls to be heard (rain, strong winds) I tried again the following nights. Sometimes it took up to 5 attempts (subsequent nights) to succeed.

Case Data:

Ringtail Possum:

- 42 juvenile Ringtail Possums from Bayside, Melbourne, Victoria
- weight range 50-177g (average weight 84g)
- 19 males / 23 females
- 5 died/euthanized during the first 24h due to injuries / bad condition
- 37 in reuniting trial
- 4 lost within trial/ mother not found
- 33 successfully reunited with mother
- success rate 79%

Brushtail Possum:

Of course the question arose if the same procedure would work with this species as well. Having had only a few cases yet all that can be said so far is that this is looking promising as well.

- 3 juvenile Brushtail Possums
- weight range 159 - 400g
- 2 males / 1 female
- 1 died due to bad condition
- 2 reunited successfully (one after 5 nights)

Findings / Observations:

- Reasons for a mother possum losing her baby include interaction with cars, cats and dogs, tree felling, probably also inexperience of mother.
- During the spring season and early autumn the incidence of lost possum babies was obviously higher.
- Ringtail and Brushtail Possum females are territorial and therefore likely to be found in their territory most nights.
- In most of the cases seen here the mother was still alive.
- Ringtail and Brushtail Possum females accept lost babies back.
- Female Ringtail and Brushtail Possums recognize their young ones by their voice.
- Female possums do not climb down a tree to retrieve a lost baby although it is calling, at least not during daylight.
- Females seem not to be disturbed by strange smells of their young, even if the baby has spent several nights in human company and has ingested unknown food.
- Even after several days (< 5 days) the females still react to the baby's call and take it back.
- Babies with a weight over 120g BW are more independent and less well to handle as they will bite and try to escape during the trial.
- Gender of the baby seemed not to be of significance for getting lost (45% males : 55% females).
- In 45 % of the identifiable cases the mother seemed not to be fully grown/mature and insecure while handling her baby.

- Younger mothers were more hesitant to come down and take the baby while older, more mature females mostly came straight down, took the baby and did not care very much about human presence.
- Female possums in general do not seem to be very much disturbed by passing cars, human presence or torch light.

Discussion:

1) Why do all these young possums get lost in the first place?

One reason might be the special suburban habitat they live in: crossing roads, being chased by cats and dogs seems to play a major role, not to forget the dense possum population that provides frequent interaction of different individuals such as fighting and chasing. Roofs, fences and trees standing wide apart create a more challenging environment to master than dense vegetation in their natural habitat.

Another interesting aspect is the observed age of many Ringtail Possum mothers: They seemed to be immature females - nearly half of the females that could be judged - not fully grown in size and the lost babies were probably their first. It could be possible that their lack of experience makes them drop their babies more likely in stressful situations.

In 2 cases the supposed mother that took the baby back had another young of the same size/age with her. It might be possible that handling twins gives a higher risk of losing one when in flight.

2) Are they actually orphaned which means all the mothers were dead or gone?

The observations presented here suggest that because in most cases the mother could be found the possum babies were not orphaned at all.

3) What made me suppose the possum that took the baby was the mother at all?

During my sessions with the possum babies at the spot where they got lost which often took several hours I “tried” any adult female possum that came in sight. I let the baby call and waited for a reaction. The reactions I could watch always followed the same pattern: Possum would stop and listen for a second call, then generally move on when not interested or start eating or grooming itself. Adult male possums were not much interested at all.

The females that took the babies later on would freeze in whatever they did before and listen. Some remained still for a longer time (up to 30 min) but would not move away. Some would move closer, carefully. Some would even call back and start a “dialogue” with the baby which then would make the baby restless.

Depending on the circumstances, I would then expose the baby to the interested female. Most females would then move closer to make contact and sniff the baby. The baby would then climb onto the lap or the back of the female or she would take it with her hands. Some females would move away a few metres to stop and lick the baby clean but most sat undisturbed where they were and groomed it thoroughly.

I had some cases of females coming down to make contact and then running off or attacking the baby. In all those cases the mother could be found later on.

Watching the females take the babies for me left not much doubt that they were the mothers as they took them instantly after making contact, cleaned them and allowed them into their pouch (younger ones) or let them climb onto their backs (older ones).

Some of them I could watch for a longer time (up to 1.5 hrs) after the reunion sitting in the same tree eating unexcitedly.

In 3 cases I could also watch the baby suckling with its head in the pouch.

In the unlikely case that the accepting female was not the mother but another possum in a similar state of reproduction it is supposed that taking a baby into motherly care will provide a much better chance of survival for the baby than any human approach.

4) Why are the babies mostly in one special weight and age range?

It is plausible that it is the special age/weight range of the baby that makes them prone to be lost. At an age when they leave the pouch for the first times and are not experienced yet to hold on tight to their mother's coat when she moves, combined with stress situations and a probably less experienced mother this could produce a higher risk to be dropped.

5) If the mother is not dead and still around, why would she not retrieve her baby?

Supposedly the stressful situation that leads to losing the baby plays an important role.

Once the baby is lost she probably does not retrieve it from the ground because it involves putting herself in danger.

Once daylight any possum would not move around much, let alone to the ground.

To be mentioned again are the cases with young, less mature mothers involved that showed insecurity and inexperience in handling their young.

6) Why would a mother possum accept a baby back and not reject it although it bears human smells and has ingested unknown food?

The assumption that unknown scents will make a mother reject her young probably results from comparison with other mammals where this is actually the case.

According to the presented cases this is not the case with Ring Tail and Brush Tail Possums where the baby's voice seemed to be the major cause for recognition. Scents were either of lesser interest or could still be recognized through the unknown smells the babies bore.

Conclusions:

Even though Ringtail and Brushtail Possums in suburbs have well adapted to their environment there seems to be a high risk for them to lose their babies at a certain age. This might actually also be a result of dense possum population.

There can not be much done to reduce the loss of young possums but the findings presented above will probably shed light on an interesting aspect of possum behaviour.

Compared to the uncertain fate of a released adolescent hand reared possum it is assumed that once the possum baby has been taken back by its mother there is a very good chance for it to be raised successfully.

Providing further studies this could lead to a different approach to handling high numbers of lost possum babies that end up at wildlife shelters each year and, relieving wildlife carers from a lot of time consuming work, to open up more resources for the care of other wildlife.

To prove that the supposed mothers actually raise the baby they accepted back more studies would be required including marking and tracking of the possums.

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