

# Expert assessment on the welfare and condition of the female elephant “Mausi” in the Circus Voyage

## Dr. Marion E. Garai

P O Box 98, Vaalwater, 0530 Limpopo, South Africa  
T/F 0027 14 755 4455, email: [marion.garai@gmail.com](mailto:marion.garai@gmail.com)

## Foreword

I, Dr Marion E. Garai, wrote the following assessment to the best of my knowledge and conscience. I would like to emphasise that I was not remunerated for this, therefore did not undergo any obligations. The apparent shortfall, that I was not able to observe Mausi *in persona* is irrelevant, as I had outstanding reliable first hand documentation from experienced observers and videos at my disposal. Above that, the appearance and condition of Mausi is well known to me from other elephants. That I have long-standing experience and the necessary qualifications to judge the physical and partly psychological condition of Mausi, as well as the keeping facilities, can be seen from my CV (available from the EEG office on request).

## 1. Evaluation object and - methods

### 1.1. Basis of the assessment, observation methods

The following assessment was compiled based on videos and observations by members of the EEG. Based on their long-standing work their information on age and origin, as well as the previous owners of the elephants, can be considered as certain. Unknown or unconfirmed data are not passed on by this organization.

Circus Voyage was only established about 12 years ago. Since about 6 years the EEG has been keeping track of the developments of their elephants. Each individual is well known to the members of the EEG. So far 2 hours of video material have been taken during personal visits to the Circus Voyage. This assessment is based only on observations and video material made directly by EEG members.

The observations were done from the visitor perspective and mostly not in the presence of the owner. Therefore one can assume that the elephant behaviour was less influenced than during the brief visits by officials in presence of the owner. The hours of observations by the EEG far exceed any official visit by state veterinaries.

### 1.2. Object of the assessment

Object of the assessment is the welfare and condition of the female African elephant Mausi, at the time of writing the ownership of the Circus Voyage (Diana and Alois Spindler).

Born ca. 1980 in the wild in Zimbabwe, she was imported at about age 1 year in 1981 for the circus William-Althoff in the Netherlands, then in 1987 she went to circus Herman Renz/NL. Since 1997 she is in the ownership of Circus Voyage.

A further four wild caught African elephants constitute the small herd. Two of them have been known to Mausi – Malou and Mogli (both born ca. 1983/84) – since 18 years. (Together since 1992 at the circus Herman Renz and then together to Voyage on 21 /11 /1997). The female Sabi (born ca. 1985) has been at the Circus Voyage since 2002, Chuppek (born ca. 1983) only since 2005. Although Mausi is the oldest cow in the herd, she holds, together with Sabi, the lowest rank in the hierarchy. A further cow Anja (born ca. 1976 in the wild, died with approx. 32 years from Pneumonia) lived at the circus from 1998 to 2008. Anja was the most important social partner of Mausi.

## **2. Physical condition and appearance**

2.1. The manner in which the outer edge of the ear pinna of Mausi (and while alive of Anja) is torn off, indicates that both were exposed to extreme stress followed by a cold weather shock. Whether this already happened in their youth when they were transported from Africa to Europe cannot be assessed.

Reasoning: During the 1990s in South Africa, when young elephants from the culling operations in the Kruger National Park were translocated to private reserves within the country, I had the opportunity to study some of these groups for my doctoral Dissertation<sup>11</sup>. Some of these juveniles showed the exact same phenomenon: the outer ear edges, sometimes up to half the ear pinna, withered after translocation and the dead skin fell off. As translocation was done during winter months, the cold weather had a considerable influence. According to the veterinarian in charge, the stress shock and following cold weather had narrowed the veins and small arteries, which prevented the blood from flowing into the outer ear edges.

As Mausi had lost her mother at a far too early age of 1 year and was transported to Europe, it is not surprising that her ears partially froze off, especially as the elephants often have to stand in the outer paddock during winter. Particularly young Africa elephants tend to feel the cold very quickly and are not adapted to the cold European climate conditions.

2.2. Mausi is very small compared to the same aged females Malou and Mogli, this means her growth has been stunted. This also indicates a huge experienced stress and bad keeping conditions. Interestingly, Anja also was rather too small, as she was smaller than the two much younger cows Malou and Mogli.

Reasoning: A relatively small stature, i.e. retarded or stunted growth and development, is also known to me from the elephants in South Africa, who experienced the shock of the culling operations at a very young age and subsequent loss of their mother and family. Even if they later adapted to their new environment and new elephant group, some of them remained smaller than normal.

Physical ailments and disabilities, illness, smallness and under-weight were also observed by us during an intensive study in Sri Lanka at the Pinnawela elephant orphanage<sup>11,15,18</sup>. We were able to show that those elephants that were ill or under-weight, also had less or no social contacts to other elephants and they were psychologically damaged. Further we were able to show that in general the orphans were in a worse physical and psychological condition than those elephants that were born at the orphanage and therefore grew up with their mother. Many of the orphans did not succeed in socially integrating themselves. The psychological<sup>1,2,3,4</sup> as well as physical damages are retained into adulthood and longer, as we could also show at Pinnawela 12 years later, when the orphans gave birth to their first born at a much later age than the Pinnawela born elephants.

2.3. The extreme walking handicap and obvious agony with her hind legs, shown both by Mausi, and Anja during her life, indicates arthritis, which can only be due to bad keeping conditions. In view of Mausi's age it can be excluded that it is an old age related arthritis. Furthermore she has been suffering from this pathological handicap since years. The cause of this illness is, based on my experience, extreme lack of physical exercise as well as having to stand on too hard and cold or wet ground. It is not possible that a travelling circus provides their animals with sufficient straw and sand and a natural ground in each locality, and therefore one must expect that the animals have to stand on concrete or asphalt.

It is also not possible that the ground can be dried quickly after rain or snow, which means that the animals stand in the wet and this under European conditions. Furthermore, Voyage does not have a winter break. So, in the winter 2008/2009 the animals were never in their permanent home quarters.

The walking handicap, and therefore reduced stability, as well as the small stature of Mausi become a particular danger in the narrowness of the circus paddock when there are disputes between the elephants. Even if Mausi is not directly attacked she cannot quickly move away from the danger zone, nor can she support herself properly if she is pushed by accident. Once she falls it can be very difficult or even impossible for such a handicapped elephant to get up again by herself. On the 2<sup>nd</sup> of January 2009 an exemplary situation was observed: The higher ranking Mogli suddenly pushed the female Chuppek causing her to stumble. Whereby she stumbled right into Mausi, who was not involved in the dispute; had she not by chance been standing in a corner of the paddock, she would certainly have fallen down. The subsequent

panic signs from Mausi were totally ignored by the others (Töffels 2009, pers. comm.) This will be further discussed in chapter 3.2.

Keeping her balance during travelling in the transport vehicle will be very difficult for the handicapped Mausi and will cause new pains each time; in 2008 she broke off her right tusk (see video of 07/11/2008)1h23 p.m.)

### **3. Psychological condition and appearance of Mausi**

3.1. Stereotypies: Mausi shows the typical 'weaving' know from zoo and circus elephants<sup>15,16</sup>.

The restrained manner in which she stereotypes (only her head nods from side to side) even when not on the chain, shows that this behaviour is already ritualised, or put in another words, already anchored and 'frozen' into her brain. Stereotype behaviour patterns are indicative of frustration, boredom and helplessness. It is accepted among scientists that stereotypies are an indication of bad and inadequate keeping conditions. Wild elephants do not weave.

The aimless searching along the ground with the trunk tip (when there is nothing available to eat) is also typical for captive elephants which have nothing to do.

Reasoning: Stereotype behaviour is known from other animals in captivity<sup>5,6,7,17,18,19,20</sup> and is always seen when the artificial environment does not correspond to the expectations of the evolved behavioural motivation. Stereotypies, or rather weaving, originate when the animal is motivated for a specific action, but does not reach its goal. For example if it cannot reach the food when its hungry (e.g. in front of the entrance to the house), or if it cannot get to the social partner (e.g. if there is a barrier or chains), or prevented from reaching the drinking trough (see video of 30/06/2007, 2h15 p.m.), or is bored and has nothing to do (e.g. too little or no occupation through food, branches, social partner etc.). In due course weaving sets in each time the animal is frustrated or bored, or cannot escape an unpleasant situation, therefore has no alternative. The past endorphin-hypothesis<sup>6</sup> could not be enhanced through further experiments. Another, the coping hypothesis<sup>26</sup>, which stipulates that stereotypies reduce stress, is also not tenable, as elephants that are brought into better keeping conditions do not stop weaving, which means the weaving is 'frozen'. The psycho-pathological model by Danzer<sup>7</sup> offers the best approach, which says stereotypies are born from frustration when specific highly motivated behaviour patterns, e.g. search for social partner, cannot be expressed due to restrictive keeping measures. The sweeping motion of the trunk tip without reason or goal indicates boredom and a lack of occupation. Often the trunk tip is rolled in and released again in a near stereotype motion (see video of 30/06/2007, 1h54 p.m.). Elephants are highly intelligent mammals and in the wild are constantly occupied with something. This also applies to the trunk, which is always in motion. If the elephant has nothing to do, as is found in bad keeping conditions, then the trunk

moves aimlessly and without goal in a stereotype manner. It goes without saying that this boredom must be very frustrating for an intelligent mammal.

### 3.2. Social contact inhibition and social isolation

Mausi shows social contact inhibition and social isolation, especially since the death of her long standing friend Anja. Very few to no affiliate social contact behaviour was seen by her even if the other elephants turn towards her, but even then its usually just an olfactory investigation. Lack of social behaviour was typically seen in the physically and psychologically damaged orphans at Pinnawela<sup>12,16</sup>, and was also seen by me in the translocated African elephant orphans<sup>11</sup>.

Losing her only social partner after 10 years must have been very hard for Mausi, who now has no one to protect her. This will have a further negative impact on her general condition. This is at least the second if not third time in her life that she has lost her closest social partner. This fact, as well as her social impoverished life in the circus and paddock, can very quickly lead to apathy, but certainly to a poorer general condition, physically and psychologically, as they both are connected.

Reasoning: Judging by the observations Mausi and Anja had a very good relationship and a strong bond<sup>8,9</sup>. Both stood close together more that average, changed location together (as in the video of 15/11/2006, 2h22), Anja protected Mausi against the more dominant cows Mogly and Malou and helped her gain access to the drinking trough (video of 30/06/2007, 2h15 p.m.). Anja replaced the mother and sister for the younger Mausi. Although Anja was a rather quite elephant, she was after all the eldest in the group and was therefore respected by the others. As has so often been shown, it is imperative that elephants have an older cow as social partner during maturation. I could show in my earlier studies on older cows in zoos as well as in the free living orphans in Africa<sup>11</sup>, that elephants living in none related groups, may form a special relationship with another female, which visibly enriches their lives. This applies especially where the mother and family are missing. The extreme shock of the culling experience, the subsequent stress through the transport and translocation process to Europe, the loss of all known family members and sudden captivity must have had devastating psychological consequences on the much too young Mausi and other wild caught elephants (see further down PTSD). It is a known fact, that zoo elephants that have lost their social partner may mourn so much that they die. Elephants, especially females, need a close contact partner. This applies even more when the elephant has lost the most important social partner, her mother. This loss is not forgotten, however, the consequences of the trauma can partially be compensated with a new strong bond. Evidently the cows Mogli and Malou have also formed a social partnership, and this since probably 18 years. Therefore, they will not be interested in Mausi, or they would have done so in the past 18 years that the three of them have spent together. That they show no interest in

Mausi is evident in their behaviour when Mausi is in danger. As mentioned above, it was observed that Mausi was nearly accidentally pushed over by Chuppek, who was suddenly pushed by Mogli (Töffels 2009 pers. comm.) Mausi screamed from fright, urinated and defecated, but none of the other females went to her, something that would have happened immediately in a social partnership<sup>8,9</sup>. This same behaviour I saw repeatedly in none related elephants, which had not social relationship together, they ignored the others, even if these are in a dangerous situation. Only relatives, special partnerships and where older cows have adopted a younger elephant, do they run to the elephant in danger and show concern. This latter behaviour was used by me in my studies<sup>8,9</sup> as definition of a strong bond.

### 3.3. Neurology, stress and effects

Frustration, sadness, missing social partner, boredom and pain can manifest as chronic stress, which not only harms the psyche but also the health. Mausi has no alternative to help herself other than weaving. She should urgently be able to build a social relationship with other elephants, but this is not possible in the present situation. The two dominant cows Mogli and Malou are not interested in Mausi. Sabi, who is low in the hierarchy, has sufficient of her own problems and Chuppek is also isolated. That neither of these females attempts to socialise with Mausi, can be put down to the fact, as shown clearly in Pinnawela, that sick or psychologically disturbed elephants most often show no intention of social integration.

Chronic stress is not visible in the behaviour or other features, but can induce chronic illness<sup>20</sup> and can emerge for example, when elephants are kept in too small a cage<sup>10</sup>, but also when there are too many people around<sup>22</sup>.

Reasoning: Natural stress also occurs in the wild (e.g. weather, predators, social stress such as food competition, dominance, natural death of family members)<sup>20</sup>, but the animal has adapted and developed “coping strategies”<sup>25,26</sup> to deal with these, this means it has developed specific behaviour patterns and learnt to deal with this type of stress. And of course there is always a close relative nearby, who helps the youngster and protects it. Human induced stress, such as culling, loss of the entire family, translocation, captivity, lack of social partner during maturation, etc., have long term consequences which manifest as, and are termed, post traumatic stress disorder (PTSD)<sup>1,2,3,4</sup>. Traumas are anchored in the brain and can at any time be relived as “flashback”. Human induced stress factors can severely damage the physical well-being, health and behaviour<sup>20</sup>. The latest neurological research shows that the elephant and human brain have great similarities, especially in the limbic system, the seat of emotions<sup>24</sup>. Elephants have, together with primates, knowledge about the “self”. This was shown among other through mirror experiments<sup>21</sup>.

#### 4. Keeping conditions

Due to her illness and walking impediment Mausi is not used for performances any more. That means, as far as I am aware, that she falls under the “Säugetiergutachten” (Guidelines for keeping zoo mammals ) in Germany. These specify a minimum space of 500m<sup>2</sup>, for 5 elephants even 540m<sup>2</sup>. But the space available to the five Circus Voyage elephants is maximum 350 – 450 m<sup>2</sup> in the outside paddock, usually less.

As Mausi does not partake in the daily rehearsals or performances any longer, and therefore has no physical or mental occupation, she should be given species-specific behavioural enrichment.

This implies a minimum of following:

- Sufficient exercise on adequate ground (not asphalt, but natural, sand or sawdust), this is imperative for foot care, joints and general well-being.
- A mud wallow for skin care. Wallowing in mud is very important for elephants, to moisten the skin and keep it free of parasites. Mud also protects the skin from too much sun and cold, a task accomplished by the fur in other mammals.
- Fresh water available at all times. As far as I can judge this is provided, however, Mausi is prevented access to the water trough by the other dominant elephants and therefore she should be given water separately. The same applies to the low ranking Sabi, who has already shown dehydration problems. The tub which functions as “bath” and is provided now and again, cannot be used by Mausi, firstly the other dominant cows will not allow her access to it and secondly she cannot use it due to her physical handicap.
- Sand is equally important and is readily used by elephants to protect the skin. It is important that they have sand available, as throwing sand onto their body is also an occupation.
- Structures, which allow scratching of different body parts must also be part of the furnishing of an enclosure, for example, large branches, tree trunks or boulders. Even in a circus one could find suitable objects.
- Branches and other food items should be given throughout the day. I assume however, that as in other circuses, food is only provided during the night and inside the sleeping tent. Feeding in the outer paddock is not possible in winter and during rainy weather in the circus, as the hay, straw, grass etc. would become wet and then turn mouldy very quickly, rendering it unpalatable and dangerous to eat. Apart from this the elephants would use the hay to throw onto their bodies and would have to be washed before the performances. This means, that the elephants stand in the outside paddock with no occupation or food most of the time. From long years of experience in zoos I know how

difficult it is to obtain sufficient amounts of branches for food in a city, even if one knows the forest warden, let alone in a new town.

- Occupation in form of sand, mud wallow and above all branches are basically important. These are however, not provided in the circus according to observations. Therefore Mausi stands alone with no occupation and no possibility for skin care in a much too small paddock. This under no circumstances corresponds to the requirements of the “Säugetiergutachten” (Guidelines for keeping mammals).
- Chaining should only be done for short periods. However, it is difficult to imagine that a circus Director will leave his elephants unchained in a tent (and one that is not a permanent structure as it has to be set up and dismantled quickly) during the night. This is already very unlikely due to security and financial reasons and a far too great risk for humans and animals. Chain free keeping is, as far as I can see, only possible in a permanent building.
- Mausi has to stand for disproportionately long hours on hard ground drenched by urine and faeces. It is therefore not at all surprising that she has arthritis and weaves.

A circus is per definition a travelling organisation. As most circuses change their location up to 50 times per year, one can assume this also applies to Circus Voyage. A sick animal, that is no longer used to perform, but is forced to travel nevertheless, should at least be given other species specific occupation possibilities and above all sufficient space to move and get exercise. All this is not available at Circus Voyage, as not even the minimum requirements of the “Säugetiergutachten” (Guidelines for keeping mammals) are adhered to.

## **Discussion**

Our study at Pinnawela, my studies on African elephant orphans and many other researchers have shown how important the social environment is for elephants. If a female cannot live a normal motherhood existence within her family, then the group she is in and individual relationships become especially important. In Pinnawela we could show that those orphans with no social relationships were physically as well as psychologically retarded, and that those that could not integrate socially, for various reasons, showed a behaviour repertoire ranging from impoverished to apathy. My studies in Africa showed that those young elephants that could build a social relationship with others displayed a much more varied behaviour repertoire and also play behaviour, which the others did not. Play behaviour is a good indicator of the psychological well-being.

An elephant that suffers from social impoverishment and even apathy, and furthermore suffers from a physical impediment, which can be put down to bad keeping conditions, cannot be in the interest of anybody, neither the circus nor the relevant authorities. Very often only the 'medical' condition of animal is considered, but the psychological and social well-being are just as important and are often underestimated. There is sufficient neurological and psychological literature available on this topic (e.g. GA Bradshaw, 2009), which cannot be discussed further in this report.

Stereotypes, illness, retarded growth, impoverished social lives and apathy are all signs of poor keeping conditions, as was shown clearly in the Pinnawela study. Mausi displays all of these: her illness (arthritis) can only be put down to bad housing conditions (humidity, hard ground, standing too long etc.). The very early death of the female Anja, who died of pneumonia, confirms that, amongst other, the keeping conditions are bad.

African elephants are not adapted to travelling or to standing in an insufficiently heated tent or cold and wet outside paddock for days and weeks during the coldest European season. In addition Mausi is socially deprived and impoverished since she lost her only social partner Anja and this affects her mental state. She is obviously not integrated into the social unit, on the contrary, now she has no help against the more dominant cows and has difficulties attaining the drinking trough, a fact that has even lead to dehydration symptoms, as could be verified with Sabi, who finds herself in a similar poor social situation. The elephants have habituated to each other through the years of being confined in a small area and restricted conditions and accept each other. This does not mean however, that Masui has a special bonding to the group and feels socially accepted, even if she has known the others for many years. Lack of aggression does by no means indicate that she is socially integrated, not to mention being happy. It follows, that her physical and psychological condition are grave and this should immediately be remedied.

### **Recommendations**

In order to improve her health Masui should immediately be moved out of the circus situation. The constant travelling, change of location, constant standing on wet and hard ground as well as far too little exercise possibility only worsen the arthritis. In my view it is unacceptable to expose her further to such cruelty. Furthermore, the frequent transports per year, whereby at each start and braking of the vehicle and at each corner, a huge load is placed on her joints and bones, and this must be extremely painful.

For her mental state a change of location and group can only be positive. She urgently needs a social responsibility and task within a group, as well as sufficient space and occupation.

She needs a place where:

1. Younger elephants are present. There is nothing more important to a female elephant than caring for young. Here she can be dominant, which will have a positive effect on her psyche and behaviour.
2. An older or same aged female is available as social partner.
3. A natural soft ground and sufficient indoor space is available, or a ground that dries quickly, so that she must not stand on wet ground.
4. Where she gets constant veterinary care for her arthritis and especially care from trained and qualified keepers. Although there are exceptions, most circus keepers are not trained and qualified, this is also unfortunately not required by the authorities. In most circuses untrained and inexperienced personnel, who cannot find job alternatives, do this job.
5. Where she has more space and freedom of movement, and species- and behaviour specific conditions are found.
6. And most important where the surrounding presents alternatives in the sense of behavioural enrichment (socially as well as in the food, stimulating enclosure furnishing, occupation, etc.)

The Osnabrück Zoo seems to fulfil all above requirements and I can only emphatically agree with a transfer to that zoo.

For the remaining elephants in Voyage Circus, her departure will have no negative effects, as none of them have a special social relationship to Mausi.

**Conclusion:** It is not acceptable to retain an elephant such as Mausi, who is no longer used for performing, in the circus. The keeping conditions do not comply with the minimum requirements in the Säugetiergutachten (Guidelines for keeping of mammals). She does not have any social ties, species specific occupation and exercise are completely absent, and not even the required minimum space is available. Furthermore, she has to constantly travel despite having arthritis, which causes permanent pain. As her stay in the circus is neither beneficial to her health and well-being or even the group, nor has any benefits to the circus management financially or otherwise (on the contrary only costs), I do not see any reason to leave her there any longer. If the Director wants to keep her in the group out of “compassion” or social reasons (I don’t see any other), then this is totally out of place. Mausi must immediately be transferred to an adequate zoo to stabilise her health and alleviate her constant pains from the arthritis. This is urgently necessary and to be recommended for animal welfare reasons.

**Dr Marion Garaï**

**Chairperson Space for Elephants Foundation. January 2010, South Africa**

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### **Appendix: Witnesses and observers**

Schilfarth, Jürgen: Visit of animal display in Mai 2004, Nürnberg

Dornbusch, Tobias: Visit of animal display on am 26.09.2004, Bochum

Dornbusch, Tobias: Assessment on 26.05.2005, Uelzen

Musanke, Klaus: Visit of animal display on am 15.11.2006, Bielefeld; Video documentation

Musanke, Klaus: Visit of animal display on 26.11.2006, Bielefeld; Video documentation

Musanke, Klaus: Visit of animal display on 30.06.2007, Cloppenburg; Video documentation

Musanke, Klaus: Visit of animal display on 20.10.2007; Video documentation

Endres, Joachim: Visit of animal display on 07.09.2008, Trier

Musanke, Klaus: Visit of animal display on 07.11.2008, Bielefeld; Video documentation

Staschiok, Gertraud, Töffels, Olaf: Visit of show and animal display on 02.01.2009, Berlin

Töffels, Olaf: Visit of show and animal display on 08.01.2010, Berlin