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South African Elephant Psychological and Social Integration Assessment:

A Trauma-Informed Perspective

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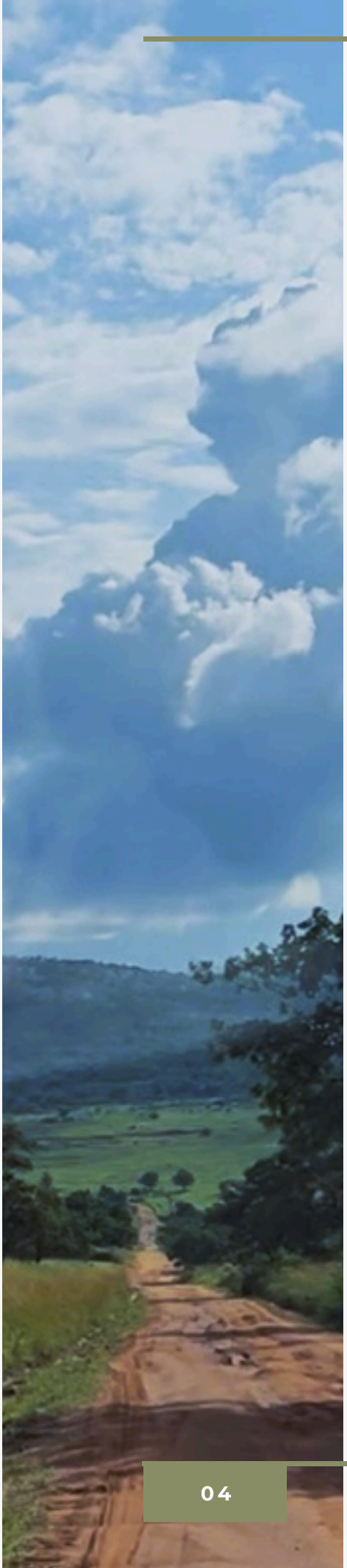

GOALS AND OBJECTIVES

To be "trauma-informed" is to: (a) recognize the universality of trauma throughout the world; (b) become more aware of trauma's many personal and societal consequences; (c) prepare for how trauma survivors may respond to our words and actions, (d) meet trauma-related needs, and (e) help to create a world that can foster growth, resiliency, and healing as well.

- Charles Figley, PhD

This Assessment was requested by the EMS Foundation (EMSF) to assess the psychological and physical well-being of African Elephants(Loxodonta africana) who are residing at the Shambala Reserve (the "Reserve"), South Africa, namely Duma who was released from a zoo to the Reserve in 2024 and the Shambala group of Elephants who have been residing at the Reserve prior to Duma's arrival. Assessment goals were threefold to provide recommendations for optimizing and revitalizing individual and group wellbeing and agency; (2) evaluate potential for social integration; (3) provide recommendations for mitigating trauma transmission and re-traumatization risk. This included assessments and recommendations for:

i. Duma's psychological and physical state, well-being and welfare;
ii. Standard of care and suggestions for improvement;
iii. Psychological patterns of resident Shambala Elephants and the possible integration with the aforementioned Elephant.

Information used to address these objectives and goals is drawn from personal on-the-ground observations by Michele Franko (MF), public records, references cited, and personal communication and extant reports provided by individuals involved in the project. Inferences concerning psychological and physical health assessments are limited to aforementioned sources and the authors' combined experience and expertise. The overall Assessment is approached from a trauma-informed perspective. A *Background* section is included to review central concepts used in the Assessment for the purpose of identifying assumptions and definitions and optimizing clear communication, understanding, and inference across disciplines and experiences (see also *Glossary*).

BACKGROUND

The Elephants

There are presently two groups of Elephants under discussion: Duma (male, 43 years old) released to the Reserve from the Pretoria Zoo in August 2024 and a group of seventeen Elephants residing at the Reserve (Shambala Elephants). The Shambala group is comprised of seventeen Elephants: Mickey (male, 43 years old), Anna (female, 40 years old), Mouse (female, 39 years old) who arrived in 2002 from a Zimbabwean safari ride enterprise; Addo (male, approximately 30 years old) who arrived in 2023 from Addo National Park; Kwandwe (male, 18 years old) and Shamwari (male, 18 years old) who arrived in 2022 from the Eastern Cape, and eleven Elephants who were born on the Reserve (males and females ranging from one year to 21 years of age). As far as can be ascertained, all four Shambala adults are unrelated to each other and Duma. At the moment, Duma lives alone. He has not been introduced to the others and has yet to have physical contact with other Elephants. Duma is, however, seemingly in contact with Elephants on an adjacent reserve.

Reserve Habitat

Shambala Private Game Reserve in South Africa covers over 10,000 hectares under the backdrop of the Waterberg mountains in Vaalwater, Limpopo province. This African bushveld and wildlife sanctuary is home to a wide variety of flora and fauna. The Reserve strives to maintain a flourishing ecosystem and achieve a harmonious and ecologically sound environment. Shambala is protected by electric fencing and extensive security personnel for this purpose. There are active Wildlife conservation and comprehensive anti-Rhinoceros poaching programmes. In addition to the Big Five species, Shambala Private Game Reserve is home to the endangered Sable Antelope, Black Impala, Tsessebe Antelope, and Black Rhinoceroses, as well as disease-free African Buffalo. The population of each species is carefully monitored.

Bio-region: Central bushveld

Mean annual precipitation: 559mm (highest rainfall from November to March)

Soil type: This area has dystrophic, acidic sandy, loamy to gravelly soil, characterized by weak structure with a low to medium base status, which reflects a higher effective rainfall than the rest of the savanna region.

Vegetation: The vegetation is classified as Waterberg Mountain bushveld and is mostly dominated by tall, deciduous Terminalia service and Burkea africana woodland with a moderate to well-developed grass layer, whereas Diplorhynchus condylocarpon dominates the rocky hills. Flat areas and lower slopes with more clay than the surrounding sands, are dominated by Acacia tortilis and A. nilotica. The higher slopes are covered with vegetation ranging from Faurea saligna to Protea caffra. Browse species include Milkbalm, Long Leaf, Large Fruited Bushwillow, Marulla, Round Leaf Teak. Duma has shown a preference to Milkbalm and Round Leaf Teak. Sumacbin grows amongst rock outcroppings and is a source for pain relief sought out by both Elephants and humans.

Other Animal Species include: Herbivorous Impala (Aepyceros melampus), Blue Wildebeest (Connochaetes taurinus), Zebra (Equus quagga) and Giraffe(Giraffa camelopardalis giraffe) and carnivorous (Spotted hyenas (Crocuta crocuta), Lion (Panthera leo) and leopard (Panthera pardus). Species such as the white Rhinoceros (Ceratotherium simum), and African Buffalo (Syncerus caffer).

Reserve Care and Carers

Within the Reserve, the Shambala Elephants are able to forage native browse, make their own decisions, and, per Reserve policy, are guaranteed lifetime care and perpetuity on the land. Abuse and physical deprivation have been replaced with health, security, and a natural home.

As Duma is new to the Reserve and comes from forty years of extreme confinement and deprivations, he has participated in a step-wise introduction which involves careful monitoring, an initial provision of special nutritious food to make up past deficits, and ensure other health and safety concerns – all leading toward his ability to forage and make decisions on his own. Day-to-day care began with and is undertaken by five carers upon Duma's arrival at Shambala Reserve on 19 August 2024. All men are originally from Zimbabwe and had worked with the Shambala Elephants at in-country safari-back ride facilities. None had experience with zoo-held Elephants. When it was decided to transfer the Elephants from the facility to Shambala, these men accompanied and stayed on as carers. They continued to do so when safari-back rides terminated at the Reserve in 2016 and began a full-fledged rewilding Elephant program. Guest visits continue but are limited and only Reserve vehicles, used. Duma's rehabilitation area is excluded from access.

When Duma's release was imminent, two Shambala carers traveled to Pretoria to meet him bringing fresh browse from the Reserve which provided a literal "first taste" of his new home. While he was being introduced to the transport crate, Duma was able to hear the carers' voices which were coupled with appealing, nutritious food. One of the carers told Michele Franko that he and the other carers have "learned a lot" having never been associated with efforts to actively promote Elephant agency. The carers further commented that they now know "how individual and feeling" Elephants are. This reflects an opening to deepen trauma-informed learning.

A TRAUMA-INFORMED FRAMEWORK

The purpose of developing a different framework of understanding and identification is that it can serve as the underpinning of a different form of action. . . We need a peaceful nonviolent methodology – a social revolution – that can only arise out of a new understanding of what we are up against and how we are tightly interconnected with all life on Earth.

-Sandra L. Bloom[1]

Introduction

Conventionally, assessments of an Animal's mental state are conducted through the lens of ethology (Animal behaviour). These evaluations draw from externalizations - what an individual Elephant is observed to do or not do. The absence of action detectable by the human eye, however, does not preclude that "something has not happened."[2] Symmetrically, a gesture or movement does not necessarily indicate a proximal and/or single cause. For instance, Elephants have sensorial capabilities that humans lack such as several communication channels including their feet and telepathy. They are able to receive information at distances beyond the scope of human detection. It is, therefore, not always possible to ascertain whether a given posture or gesture relates to a proximal cause. While behaviour provides critical information, it is only one expression of psyche and does not include inquiry into internal or past experiences and contexts, nor is one gesture unique to one emotional and psychological state. There is not always a consistent one-to-one mapping from psychological state to physical expression.

[1]Bloom, S.L. in Bloom, S.L, J. Cook, C Figley, (eds) Social health in a fragmented world: The impact of trauma, adversity, and violence on civilization (in press)
[2]Bradshaw, G.A. 2015. Psychology Today Why Animals Need Psychology

In contrast, a psychological framing expands the observational aperture to include a range of spatial and temporal contexts. There is an explicit intent to hear and understand an individual's biography, in their own voice– what and how an individual has experienced over their lives. As Dr. Sandra Bloom coined, a trauma-informed approach shifts the question from "what's wrong with you" to "what happened to you?" and in this way, objectification is avoided by respecting the primacy of the client's perspective and experiences. Furthermore. a trauma-informed framework is concerned with the well-being of all dimensions of living - physical, moral, cultural, social (which includes the ecological), and psychological with the understanding that these parsed elements are intertwined. First developed for humans, psychology extends to nonhumans because of the understanding that Animals possess capacities for consciousness, thinking, feeling, and vulnerability to trauma comparable to those of humans. Indeed, insights into the human mind, experience and trauma derive from so-called Animal-models, that is using nonhumans as surrogates in experiments and in ways prohibited for humans – a trans-species psychology. Human-nonhuman comparability is implicit in all psychological studies and inferences. [3]

A psychological trauma-informed approach was instrumental in revealing the underlying causes for a series of events, namely, unprecedented Elephant behaviour in the sexual assault and killing of more than 100 Rhinoceroses. Ethology predicted that introduction of older male Elephants would quell the violence of / by young male Elephants who were the agents of widespread Rhinoceros' fatalities. By reinstating in part traditional Elephant social structures, it was believed that the teen-aged male behaviour would normalize. However, the structural "fix" was only temporary.

Eventually, the asocial behaviour – totally absent among Elephants prior to European colonization - resumed and the young "problem" Elephants were "removed" by lethal measures. "The [older male] introduction helped in normalizing the age structure...although some of the younger bulls will still need to be removed in order to produce a more normal bull population...in Pilanesberg, all the problem animals were removed from the reserve."[4] The lesson of trauma is that it penetrates into body and mind – the individual is changed and even when his/her environment changes, the traces of trauma remain. The story has repeated elsewhere involving both female and male Elephants.

[3]Bradshaw, G. A., and Robert M. Sapolsky. "Macroscope: mirror, mirror." American Scientist 94, no. 6 (2006): 487-489; Bradshaw, Gay A., and Barbara L. Finlay. "Natural symmetry." Nature 435, no. 7039 (2005): 149-149; Bradshaw, Gay A., and Mary Watkins. "Trans-species psychology: Theory and praxis." Spring: A Journal of Archetype and Culture 75.1 (2006): 1-26

[4]Druce, Heleen, Kevin Pretorius, Dave Druce, and Rob Slotow. "The effect of mature elephant bull introductions on resident bull's group size and musth periods: Phinda Private Game Reserve, South Africa." South African Journal of Wildlife Research-24-month delayed open access 36, no. 2 (2006): 133-137.

Reconstruction of the young Elephant biographies, however, their history of successive, severe traumas, not only revealed the causes of their violence, but also why older male introduction failed to hold.[5] Trying to reproduce traditional external social structures cannot readily undo profound internal change. Symptoms of the young males reflected the long-term impact of severe psychophysiological trauma in their infancy when their mothers (including allomother constellation) were slaughtered. This early exposure to violence was severe in and of itself, but it subsequently left them without the normal psychosocial development that occurs within the prolonged maternal-infant attachment relationship in the first years of life. Such experiences are known to have serious neurophysiological as well as psychological consequences in humans and all other Animals. What someone experiences on the outside translates to the inside.

While brains and minds develop in relationship, Elephant minds develop in a nested complex of relatives. During gestation and the first four or five years of experience are critical for normative brain development. Intimate, unbroken, positive, loving exchanges and nursing which an infant Elephant experiences with her mother and aunties “on the outside” ensures healthy development “on the inside” - healthy immunological, neurobiological, endocrinal, psychosocial, and other internal systems, including the nervous system and the ability to self-regulate.[6] This is particularly important for the brain’s right hemisphere which grows more rapidly in the early years.[7] What neuropsychologist Allan N. Schore notes in humans, may hold in Elephants: In males, there is a slower rate of maturity of the right brain’s emotional center compared to that of females, as well as higher surges of testosterone in the right hemisphere,[8] which may relate to the formative period of time that young male Elephants spend with older males.

While the brain’s left hemisphere is involved with focused, logical, and analytical thinking, the right hemisphere is concerned with what, who and how it experiences, social connection, unboundedness, creativity, and emotions.[9] An integrated brain relies primarily on the wisdom of the right brain.[10] It is this side of the brain that grows more rapidly in early life, due to its foundational importance for socioemotional intelligence.[11]

[5]Bradshaw, G.A. Elephants: What Animals Teach Us about Humanity. Yale University Press. 2009.
[6] Darcia Narvaez, Jaak Panksepp, Allan N. Schore, & Tracy R. Gleason, Evolution, Early Experience and Human Development: From Research to Practice and Policy (New York: Oxford University Press, 2013).
[7] Allan N. Schore, The Development of the Unconscious Mind (New York: W.W. Norton, 2019).
[8] Schore, Allan N. "All our sons: The developmental neurobiology and neuroendocrinology of boys at risk." Infant Mental Health Journal 38, no. 1 (2017): 15-52.
9] Iain McGilchrist, The Matter with Things: Our Brains, our Delusions, and the Unmaking of the World (Vol. I and II) (London: Perspectiva Press, 2021).
[10] Ron Tweedy, ed., The Divided Therapist: Hemispheric Differences and Contemporary Psychotherapy (London:Routledge, 2021).
[11] Schore, Development of the Unconscious Mind

Critical neuronal pathways and patterns of affect, sociality, and self-regulation are governed by the right hemispheres. Rapid brain growth is one of evolution's methods to help a baby adapt to her new environment. An infant's mind and body are extremely sensitive to experience, fully open to receive physical, psychological, emotional and social nurturance. This window of extreme vulnerability is purposeful because it optimizes the ability of a baby to shape into their culture, their society, their family.

An Elephant baby is born into the nucleus of the natal family which is a fractal of dynamic, multi-dimensional relationships across space and time. [12] They are shaped by multiple, diverse relatives and tuned to receive nurturance to develop into a stable member of society who fits in seamlessly like a unique piece in a seamless jigsaw puzzle. [13] Although there may be physical distance, everyone remains connected to the layered constellation of Elephant society by maintaining communication through multiple channels including, as Dame Daphne attests, telepathy, and following traditional customs and routes.[14]

There are strong individual differences, however, which are influenced by varying lines of heritage, which we might regard as varying psychosocial and ecological provenances. Inheritance of traits (genes) which are influenced by experience (epigenetics). Two individuals from the same family may respond quite differently to the same circumstances. Age also is another contributing factor to differences in experiential repertoires. In summary, then, social relationships are integral to well-being and healing, core to Elephant identity and a sense of a whole self.

[12] Wittemyer, George, Iain Douglas-Hamilton, and Wayne Marcus Getz. "The socioecology of elephants: analysis of the processes creating multi-tiered social structures." Animal Behaviour 69, no. 6 (2005): 1357-1371.
[13]Narvaez, Darcia, and Gay A. Bradshaw. The evolved nest: Nature's way of raising children and creating connected communities. North Atlantic Books, 2023.
[14] Dame Daphne Sheldrick, pers. Comm, to GB

Psycho-physiological Trauma

Trauma constitutes a violation of these normative relational parameters. Its healing, therefore, entails relational repair. Trauma and its healing do not occur in a void. Even though Elephants have been orphaned such as Duma, they still retain receptivity and need for social connection. These relational deficits are psychosocial wounds in need of healing.

Trauma is a kind of stress. Stress is what we experience when there is a differential between psychological and physical expectations to which we individually evolved and the conditions we experience. Susceptibility to stress varies with species, cultures, and individuals. Its magnitude and intensity also vary with stressors (agents and causes of stress). In itself, stress is not harmful. We experience stress every day, but in most cases we are able to mitigate its effects. If there is physical stress, for example, it is too cold, we can go inside to warm or put on a jacket. If there is emotional stress such as someone has upset you, then you can leave the situation or talk it over. When we are not able to mitigate stress or if it persists, we experience chronic stress. Chronic stress is stress sustained above healthful levels.

Trauma is a stressful event (or succession of events) that is so extreme, so overwhelming, that it exceeds psychological and physiological capacity. A traumatic event is one where the individual cannot adapt, accommodate or escape from assaultive conditions (e.g., abduction, beating, deprivation, torture, abuse, fear of death or that of someone close, other violence).

Post-traumatic stress disorder (PTSD) is a formal diagnosis for resultant symptoms that include depression, hyper-vigilance, nightmares, inability to regulate emotions, extreme fear, disconnection from others, dissociation, disorientation, and physiological ailments. When traumas are multiple and/or prolonged and occur at a young age, Complex Post-Traumatic Stress Disorder (CPTSD) results. Symptoms are similar to PTSD, but tend to be more pronounced and healing more challenging. Trauma is transmissible both over time (intergenerationally) and space (socially).

Trauma in Context

Elephant psychological trauma was likely absent or rare prior to colonization. First, the world in which Elephants live has changed and so they will and have. The developmental contexts, the traditional “evolved nests” to which Elephants are evolutionarily adapted have been radically altered. The normative developmental arcs of the adult Elephants at the Reserve (Shambala group and Duma) have been violently disrupted; they did not receive the care to which they have evolved, nor any reparative substitution.[15]

[15] The David Sheldrick Wildlife Trust has developed a cross-species trauma-informed care design for orphaned Elephants; see description in Bradshaw 2009, Elephants on the Edge, ibid

Some of these changes express physically and physiological (e.g., tusklessness)[16] and some psychological (e.g., PTSD).[17] Events such as a Lion attack, wildfire, or even volcanic eruptions were and are traumatic, but are foundationally different than what Elephants have experienced increasingly over the past 500 years and, in particular, the last century when hunting and human development increased exponentially. Such natural events were part of Elephant narratives and events to which they were adapted. Similar to other species, Elephants co-evolved with their environment and its attendant dynamic changes and cycles. In most instances of natural events, there are ways to avoid or escape the event.

Second, prior to colonization, Elephant social and ecological structures and processes were intact, their society, cohesive. Individuals and families were embedded in a healthy and supportive community which acts as a buffer for psychological disruption and changes. Intact migration routes also helped maintain social coherence. Now, however, these mechanisms of social cohesion and repair are fractured. Anthropogenic events exceed historic levels in magnitude, intensity, and extent. By all measures, human impacts have been so extensive that adaptation is nearly impossible. While some have asserted that PTSD in nonhumans is adaptive, it is not. It is maladaptive. One only needs to juxtapose natural Elephant prosociality to intra- and inter-specific violence across reserves and parks to see this.[18]

Third, life was generally predictable. In contrast to infrequent, significantly disruptive natural events, human intervention and violence are unpredictable and sustained, subject to human timetables and agendas. Elephants made captive, such as zoo and safari ride Elephants, embody two separate, conflicting rhythms: those of Nature and those of humans. This relates to the internal psychic tear of trauma which is created at the interface.

The depth to which these psychic, cultural, and physical assault by humans have affected Elephants is reflected in the widespread symptoms of Complex Post-Traumatic Stress Disorder (CPTSD) which include intra (e.g., male on male killing; female on female killing; infanticide) and inter-species (e.g., Elephant sexual assault and killings of Black and White Rhinoceroses) violence and fatalities, nightmares, exaggerated startled response, stereotypies).[19]

[16] Parker, Ian SC. "Tusklessness and tusk eruption in east African savanna elephant." Journal of East African Natural History 112, no. 4 (2023): 40-46.
[17] Bradshaw, G.A. Elephants on the edge: What Animals Teach Us about Humanity. Yale University Press, 2009.
[18] Y. Pretorius and M. Garai, 2012. Mabula
[19] Bradshaw, Gay A. Elephants on the Edge: What Animals Teach Us about Humanity. Yale University Press, 2009; Bradshaw, Gay A., and Allan N. Schore. "How elephants are opening doors: developmental neuroethology, attachment and social context." Ethology 113, no. 5 (2007): 426-436; Bradshaw, Isabel Gay. "Not by bread alone: Symbolic loss, trauma, and recovery in elephant communities." Society & Animals 12, no. 2 (2004): 143-158; Rizzolo, Jessica Bell, and G. A. Bradshaw. "Prevalence and patterns of complex PTSD in Asian elephants (Elephas maximus)." (2016); Pretorius, Y. pers. Comm.

Elephants continue to experience other forms of trauma which are regarded as standard "management tools": translocation, killing to reduce numbers in parks and reserves, and contraception – the effects of which are known to be devastating. [20]

Psychological Assessments

The purpose of a psychological assessment is to understand an individual, or a group of individuals, relative to their needs for living in positive mental and physical health – both of which are relationally-based. These assessments can be instrumental in helping design and provide an environment absent trauma triggers.

When Elephants, such as Duma, are brought to Reserve, relational repair begins with the land. Reunion with the natural environment entails more than provisioning nourishing food and an "Elephant friendly" habitat. As in Duma's case, arriving in Reserve initiates revitalization of relationships with the land, our mutual foundational family. In addition to the absence of stressors (e.g., unrelenting threat, lack of shelter, beating, other injuries, food deprivation, nutritional deficits), an Elephant is able to revive positive, supportive and nourishing relationships with the natural world- the grasses, air, Trees, water, and other Animals. Absence of threat or potential threats (e.g., trauma triggers) and relational restoration allow his/her body and mind to calm, rest and begin to heal even when the locale is not their homeland.

At one level, psychological assessments are straightforward. The record of serial traumas automatically points to a predilection for CPTSD. Beyond tacit knowledge of multiple traumas implicit in Elephant captivity, additional records and information can enhance insights into the particulars of a given Elephant's experience. However, most often there is a lack of accurate information and/or reluctance, indeed many times, refusal, by zoos and other Animal exploitative organizations and industries to share information. As a result, it is difficult to ascertain details which might increase inferential rigor relative to assessment accuracy. Nonetheless, any information which may provide insight into the psychological arc of an individual is extremely useful for better understanding healing needs and deficits, as well as potential risks of re-traumatization. Re-traumatization such as triggered flashbacks deepen the psycho-physiological wound delaying and even blocking healing. Preventing re-traumatization is integral to trauma healing. This being said, it is a challenge to be certain how an individual may respond to a given event or interaction. Listening to the individual and time are the greatest sources of understanding and healing.

[20] Druce, Heleen, Kevin Pretorius, Dave Druce, and Rob Slotow. "The effect of mature elephant bull introductions on resident bull's group size and musth periods: Phinda Private Game Reserve, South Africa." South African Journal of Wildlife Research-24-month delayed open access 36, no. 2 (2006): 133-137; Carnie 2004; Garaï, Marion, Rob Slotow, Richard Carr, and Brian Reilly. "Elephant re-introductions to small fenced reserves in South Africa." Pachyderm 37 (2004): 28-36.


NO ENTRY
Private Function Facility
DO NOT Approach The Elephants

ELEPHANT ASSESSMENTS

Duma

Life Arc

Duma (re-named from variously “Charley” or “Charlie”) is forty-three years old having spent the first half of his life in a circus and the second half in a zoo. He was approximately two years old when he was wild-caught and abducted in 1984 at the Hwange Game Reserve in Zimbabwe. The 1980s were an intense period of mass killing to populate national, private and provincial parks and reserves with surviving infant Elephants who were transportable.

Duma was transported as an infant to South Africa where he was used as public entertainment in the Boswell-Wilke Circus for the following sixteen years. Vestiges of circus training which is accomplished by brutal psychological and physical coercion occasionally appeared. Once, for instance, Megan Carr saw Duma standing on a tiny block of cement which, she surmised, was the kind of dangerous “trick” he was forced to learn and perform. In May 2000, Duma was transferred to Boswell’s Natal Lion Zoological Park. One year later, in 2001, Duma was “loaned” to the National Zoological Garden of South Africa in Pretoria (Pretoria Zoo). The reason for the transfer is unknown, but is correlated with the transfer of Thandi, a female Elephant also owned by Brian Boswell.

Relational History

Duma was housed with and/or interacted with multiple captive-held Elephants of which these are known:

- Thandi Her birth is given as 1981. She was wild-caught but it is not known how her date of birth was ascertained. Both she and Duma were part of the same or several massacres from which surviving orphans were captured and transported to the Boswell-Wilke Circus. After Thandi killed a handler on a film set on 15 April 2001, Thandi and Duma were transferred to the Pretoria Zoo three months later in July. At some time before, Duma was observed mounting Thandi, but no pregnancy resulted. On 28 March 2008 seven years later, Thandi was euthanized ("by brain shot with 0.375 rifle while being anesthetized"; Autopsy report 28 March 2008) for suspected TB and colic. Duma and Thandi had known and lived with each other for 26 years. Thandi was twenty-seven when she died.

- Pumbi was a female Elephant whose birth was recorded as 1985, Kruger National Park. It appears that she was wild-caught and abducted in 1987 and arrived at the Pretoria Zoo on 12 March of that year. Similar to Duma and Thandi, Pumbi had witnessed the violent slaughter of her family and thrust into a threatening environment without normative care and nurturance as a baby. She was sixteen when Duma and Thandi arrived at the zoo in 2001. Duma and Pumbi mated and she gave birth to a female child named Lerato (Deneo) on 21 March 2011. Lerato died 3 weeks later, 11 April 2011, with the official death reason described as being "rejected by mother; breathing problems." On 3 March 2012, almost a year after Lerato's birth and death, Pumbi was treated for a suspected uterine infection and given a course of antibiotics. A later scan of her uterus contradicted this diagnosis, however. Pumbi had begun showing symptoms of respiratory distress. Antibiotics continued to be administered but she continued to have failing health, increased discomfort and inappetence. "As Pumbi's food intake was sporadic it made administering the drugs very difficult. At times we were able to hide it in treats for her. . .but the weekend's cold and rainy weather exacerbated her condition" (attending physician, NZG, Dr. Ian Espie). On 3 April 2012 at 07:45 AM, Pumbi collapsed in her enclosure. Her cause of death was attributed to be respiratory failure from bronchial pneumonia. Having lived with Duma for eleven years, she and their child Lerato bring the loss of relationships for Duma in the zoo to three.

- Landa was a female Elephant whose birth is recorded as 1984, Kruger National Park.She was abducted after mass slaughter then transported to the Brian Boswell Circus, and shortly thereafter, to the Pretoria Zoo, 28 April 1986. Landa would have been at the Pretoria Zoo when Pumbi arrived in 1987 and when Duma and Thandi arrived in 2001. Landa, Duma, and Thandi were all post-slaughter infants transported to the Brian Boswell Circus, then onto the Pretoria Zoo. It is recorded that Duma and Landa shared an enclosure.

Records from December 2019 show that the faeces in the enclosure where Landa and Duma lived were filled with sand. It was suggested that this was caused by the Elephants ingesting sand as their food was placed on loose sand. The following year on 21 October 2020, Landa stopped eating. The previous three days, she had not finished her food. She was described as "slightly depressed" and showed a bulge in the right para-lumbar area. Landa was given banana leaves and fresh grass. On 23 October; she was immobilized for the administration of a rectal enema. Landa died two days later on 25 October 2020. According to the post mortem report, Landa developed severe colic. Her death was described as "acute". Autopsy revealed a significant lesion where there was massive sand impaction with complete blockage of the distal colon lumen and large amounts of accumulated fluid anterior to the blockage. She died at the age of 36. Duma knew Landa for nineteen years, bringing loss of companions to four. He was then alone for the next five years until his release in 2024 in harmful and depauperate conditions. As Megan Carr describes photo, *"Night rooms where Duma and other Elephants were kept whilst the enclosure was cleaned once a day and food provided twice a day. There are two such night rooms, the doors are operated from a control room upstairs. Plenty of signs of Elephant distress on the walls. No cushioning was provided for the elephants who, when medically treated, were treated in these night rooms, they would be darted from above and then they would have toppled with the full weight of their bodies on the hard surface of the concrete flooring. The narrow slits acting as windows allowing very little ventilation."*

(NB: Prior to Duma's arrival, two other Elephants had died or were removed. Amarula was a male African Elephant "donated" to Pretoria Zoo from Kruger National Park the same day as Landa arrived on 28 April 1986. His report entry is indeterminate as it states he was 7 years, 7 months, 11 days of age "at the time of lost ISIS tracking.". A second male Elephant was also "donated" to Pretoria Zoo from Kruger National Park in 1991. He died at the Zoo at 9 months, 17 days of age. (*No database file; from Pretoria Zoo Taxon report*).

Arrival in Reserve and Current Status

As documented by Megan Carr, *"In 2020 the EMSF started negotiations with Minister Barbara Creecy and the South African National Biodiversity Institute for the release of Charlie from the National Zoological Gardens. From 2021 the EMSF conducted visits to Duma and recorded his behaviour and physical health with the assistance of elephant experts. In July 2024 the EMSF and a team of experts moved into Duma's enclosure at the Pretoria Zoo and remained with Duma until he was evacuated from the Zoo on the 19th August 2024. A crate that was specifically designed for Duma was placed in his enclosure and he was encouraged to enter the crate. He fully entered the crate on the third day. On the 19th of August 2024 Duma, from his bespoke crate, he was released in the Reserve."* Megan Carr describes that a group of zoo employees attempted to block the vehicle from leaving, while heckling and yelling abusive language. Duma was very stressed and, in the process, damaged his tusk in the crate. As a consequence of this and attempts by the zoo staff to stop his departure, he spent five additional hours in the crate before the truck was able to leave for the Reserve. After another five hours of travel, Duma arrived at the Shambala Private Game Reserve.

Upon arrival at the Reserve, Duma emerged from the crate into an acclimatization boma where he lived for three weeks. He was secured here from 19 August to 3 September 2024 for purposes of quarantine. On 3 September, the boma was opened to a two hectare area. He had continued, free access to the boma and was given a variety of food. During all this time, he met and interacted with his carers. Two months later, on 30 October 2024, the gates were opened to an additional twenty-seven hectares with river access, trees, numerous natural mud pools and natural watering holes. Currently, Duma has free, unimpeded access to the acclimatization boma, the original two hectares area and the larger twenty-seven hectares. These areas are bounded by both electrical and steel boma fences. There has never been any free human contact (i.e., physical space between human and Duma is always separated by fencing). His care has been provided based upon a protected contact model.

The rehabilitation boma and the twenty-seven hectare area with the two-hectare area between them, are fenced separately to provide Duma an extra layer of security and allow the carers to observe and monitor him without disturbing his private space. There is an adjoining 200 hectare area which separates physical and visual contact between Duma and the other, resident Shambala Elephants. It is, however, linked to the rest of Duma's 27 hectare rehabilitation space and is fenced off from the rest of the Reserve. There is a gate between the 27 and 200 hectare areas which is envisioned as providing Duma access between the areas and which could be used to allow the Elephants to see each other and approach the fence from either side of the 200 hectare area. In the interim, however, before any formal reintegration might occur, Duma and the Shambala Elephants can and do communicate with each other. There is evidence of ongoing communication between Duma and the Shambala group as well as those in the neighboring reserve.

Carers have observed/heard Duma make low rumbling in the direction of the neighboring reserve. When he visits the river, Duma is closer to the neighboring reserve. All these observations indicate that Duma can draw on Elephant communication repertoires.

After custody was awarded to Shambala and crate training commenced, Megan Carr and 4PAWS personnel took over care and food provision. Duma is watched over twenty-four hours a day by carers.While Duma browses and forages on his own, Reserve carers continue to provide daily supplements to mitigate and increase nutritional needs after years of improper diet and inadequate nutrition. This has helped him transition from a zoo-based routine. Duma is now provided with a more natural variety of food, which includes fresh vegetables, fruit, teff hay, daily fresh-cut native browse, boskos (a processed herbivore pellet feed consisting of ground acacia, maize, lucerne, salt for nutrient and diet supplementation) and a glucosamine supplement mixed with banana and bread for joint support.[21] Hand-feeding has provided an opportunity for Duma to acquaint and build trust with the carers. Hand feeding has now stopped. Both the gradual change in food provisioning and area expansion support self-reliance. Guest visits and tours in vehicles are intended to continue, however, Duma's reserve rehabilitation camp is not included in the tours; no guests will visit this area. He will be able to hear vehicles, voices, and potentially view them.

Psycho-emotional Stability

By all measures and accounts from non-zoo personnel, Duma is extremely astute and emotionally intelligent. Emotional intelligence includes a spectrum of capabilities including recognizing and understanding emotional states of others, self-awareness, empathy, self-regulation, navigate new (and) social situations appropriately (social intelligence) and building positive relationships. Critically, when an individual has sustained severe, multiple traumas as Duma has, emotional intelligence skills are overwhelmed and diminish because of intense fear and disorientation in relationships. Or, again as in Duma's case, normative, prosocial socio-affective regulation by mother and family was not only lacking but replaced by violent rupture. Duma's ability to maintain emotional acuity in the face of decades of trauma, including the near absence of any normative socio-affective development (Adverse Childhood Experiences; ACE), speaks of an exceptional individual. This does not imply that such internal balance is rare among traumatized Elephants, rather it is simply astounding.

Duma is fully cognizant of human intentions, to the degree that his perspicacity might almost be called prescient. He clearly understood the significance of the rescue team. He immediately showed positive interest, actively studying and following, even stretching his trunk out as far as possible so, as best he could, continue to track and observe the team, Megan Carr in particular.

[21] Boskos Pellet Feed

Duma was also eager to approach and readily learn to walk into the crate in which he would travel to the Reserve. Notably, any prior contact with a vehicle and transport was associated with negative, traumatic experiences (e.g., capture and transport as an infant, transfer to and during circus use and later to the Pretoria Zoo). However, he showed eagerness to learn how to walk into the rescue crate and approached it without fear. This is but one example of how perceptive and discerning he is. In addition to being fully aware of real and present danger, Duma was advised of his own vulnerability and limited ability to safeguard himself from harm. For example, although sedated for the travel, Duma was extremely perturbed by the threat and noise by zoo hecklers while he was crated and readying for transport. In response to the outside ruckus, his fearful movements resulted in chipping his tusk.

Duma's attention to humans is not casual but thoughtful and discerning. He is an astute, careful observer. After spending considerable time with Duma both inside the Zoo and after release to Shambala, Megan Carr noticed this, *"At times he stopped moving and seem to intently study me. I can, with confidence say, because I have observed Duma for many years and I have witnessed his reaction to certain people, he really seems to closely observe and remember people."* In contrast, prior to his release, a zookeeper who was described as being close and the most familiar with Duma told EMSF Team member Megan Carr to call Duma over as he ignored the zookeeper when she called him over. The zookeeper then asked Megan to "make" Duma come over. Megan asked and Duma complied without any need for coercion. As Megan Carr recounts, *"The construction team manufactured and attached a training wall to Duma's enclosure. During this time, Duma was confined to one of his night rooms. I kept speaking to him from outside as he poked his trunk through one of the narrow-slit windows."*

In another example of discernment, prior to transport, the rescue team purposefully made noises around and atop the carrier while Duma was inside with the intent to desensitize him to outside disturbances and carrier movement which would accompany the use of cranes and other heavy machinery before and during transport. These experiences did not appear to worry him nor were they to negatively influence his feelings toward his would-be carers. This awareness is reflected in the contrasting ways in which Duma responded to external noise/threat when executed by the rescue team and that of zoo supporter hecklers. Duma met the Shambala carers and rescue team in the negative zoo setting but did not relegate to a negative experience.

Duma also shows a well-developed sense of presence. Being present is how Wildlife survive. Being distracted, “lost in thought” or less than fully embodied in the environmental now leaves an individual vulnerable and unaware of any pending danger. However, it is not uncommon for severely traumatized captive-held Elephants to psychologically withdraw, dissociate from their environs, and show disinterest in what is happening. A withdrawal from presence is a form of defense and escape from the horror in which they are immersed. In an earlier assessment at the zoo, Duma was described as “bored” and stressed (e.g., slow walking, abraded tusk) and engaged in stereotypy (another symptom of seeking to compensate for threats or withdrawal from present).[22] His tendency for stereotypy diminished quite quickly after arrival at the Reserve. Furthermore, his eagerness to learn how to board the crate suggests that, even in the zoo, his mind was present. Upon meeting him the first time at the Zoo, Megan Carr was startled to find that, unlike other captive-held Elephants she had met at the Johannesburg Zoo, Duma was “not shutdown,” but alert. When the opportunity showed itself, Duma readily sought engagement with the rescue team and showed great curiosity. All these instances reflect social discernment, sensitivity and engagement.

Despite a lifetime of threat and deprivation, Duma appears to maintain a high degree of self-confidence and a relatively intact**,** balanced sense of self. These capacities promote ease and an openness for relationships as well as attenuate stress in the face of new situations. Once, at the Zoo, while rescue Team members were examining the night rooms and how the doors operate, Megan Carr recalls, *“Duma had collected some of his teff from the fake rock section of his enclosure and brought the teff to fence so that he could eat and watch us at the same time."* Duma also shows a sense of personal space and awareness of boundaries, exercising agency as Megan Carr continues, *“At another time,an individual associated with the team crossed a red line painted on the ground outside Duma’s enclosure. This demarcated the limit to which Zoo staff were allowed to approach Duma. Any closer, he would be able to reach them with his trunk. When the human crossed the line, Duma slapped or tapped the man’s shoulder with his trunk…”*

221]Report on the behavior and status of Charlie, the bull Elephant at the Pretoria Zoo, Garai et al.

These incidents demonstrate Duma's full awareness of his own boundaries and those in which he was embedded. They also suggest that he retains a sense of being in charge and respectful of his environment. His own presence extends beyond its bodily form, to include space around him – what we might regard as maintaining, as best he could under zoo threats and strictures, "personal space." He is circumspect and retains a solid sense of self-respect. He is not afraid to assert his needs and views appropriately. (Appropriately is used to infer that Duma seems to know when he can safely assert and when he cannot, the latter in the zoo or circus where there were likely reprisals if he did not comply to human demands.) Megan Carr describes one incident when, *"it was decided that Duma should be vaccinated against Clostridial diseases prior to arriving at Shambala. The dart was prepared and administered. Duma immediately spun around sensing the short sharp sting of the dart but that was his only reaction until the next day when a visitor to the zoo was standing innocently at the same tree. Duma deliberately collected sand in his trunk and thrust this at the person who had administered the dart."*

Overall, Duma has shown eagerness, willingness, and confidence to engage in new, positive situations. During the transitional phase when the EMSF and 4PAWS Teams arrived daily at the zoo, Duma would always walk quickly toward the training wall without being called, even if he was on the other side of the zoo enclosure. After arrival at the Reserve and several hours' travel on top of the seriously disturbing experience of the zoo protesters, Duma immediately and intensely investigated the new rehabilitation boma. He approached it with openness and curiosity, rather than apprehension and fear, readily exploring the expanded habitats and browsing on his own.

The first night at the Reserve, Duma felt sufficiently at ease to lie down and sleep in his acclimatization boma. He ate with good appetite and showed very little visible signs of stress the following day. Later, when he was given access to expanded habitat areas, Duma entered calmly.

In response to the twenty-seven hectare expanse, he did, however, initially turn back to the acclimatization boma. Shortly thereafter, however, he purposefully returned to the expanded habitat to explore. Duma now shows self-assurance and trust in his new home to the degree that he does not always return to the boma area at night. Once, when there was a lightning storm, he hurried back to the boma. In this latter instance, finding shelter in a storm is natural and canny, but it also shows a sense of security associated with the boma area and insecurity to be on his own. (Notably, when a second storm occurred, Duma did not return to the boma.) He sometimes carries back a branch to the boma which suggests that he associates the boma with "home base."

At the Reserve, Duma has not exhibited the regular and more intense stereotypy commonly observed in the zoo, symptoms of which included slow walking, abrading his tusk, "extended periods of rocking side to side, touching of face or body, lifting up trunk waiting for food, twisting, twirling, and rotating trunk." Much of the stereotypy was attributed to boredom which, it was asserted, can diminish, even disappear when in Reserve.[23]On rare occasions, when a new situation arose, Duma began low amplitude stereotypy.

For example, he was observed engaging in "mild" stereotypic swaying when Michele Franko first met him.[24] She was someone completely new. Duma's stereotypic swaying also coincided with the absence of the carers who were on brief holidays and the arrival of two women, one familiar (Megan Carr) and one who was completely unknown to him (Michele Franko). The first day with Michele Franko, Duma showed curiosity. The next day, however, his established carers were still not present for the morning feeding routine. It was then that Duma began brief, mild stereotypy. This shows Duma's natural open confidence yet an underlying vulnerability. While correlated with an abrupt change in routine, the stress expressed in swaying also suggests emotional connection with the carers. He has not exhibited stereotypy since these early days.

One occasion embodies both Duma's tentativeness and his openness to forming stable relationships. It also shows the power of trust built from assurance, consistency and care which is a beautiful, essential element of trauma-informed awareness.

[23] Report on the behavior and status of Charlie, the bull Elephant at the Pretoria Zoo, Garai et al)
[24] (MF: "My second day there, he saw me holding an apple. I turned and walked toward the boma where he turned to go inside and to avoid him getting too close to electric fence. MC had stepped out and was quietly behind me. I then tossed Duma the apple while Megan went inside the storage container for his vegetables, which he has become expectant of as routine. MC gave Duma two servings by hand. He had a healthy, large, moist bolus fecal defecation. He also had a soft penile drop (no urine) during both interactions, and mild temporal flow both sides. We had not given him the banana bread-supplement mixture which usually follow vegetables. We were waiting for the regular carers. Duma began mild swaying two minutes, then relaxed and occasionally effected mild periscoping."

This is an account from Megan Carr which accompany images below,

"The gate between the 2 hectare rehabilitation area and the 27 hectare area was opened. Duma stood at the threshold. Shadreck Ndlovu one of the Elephant experts at Shambala is trying to encourage Duma to walk over the threshold with fruit.

Duma stretching his trunk over the rail but still refusing to step over the rail.

Duma lost interest and walked past the opening to his teff where he stood calmly eating. . .At 08.33am Duma was still eating his browse and teff and I wandered down from the bungalow where Michele Pickover and a Shambala carer were sitting, to the fence line to take some images of him.

Then Duma saw me

and determinedly walks toward me.

He is walking quite fast and I stop filming him and I start walking towards the opening where Shadreck had been standing the previous afternoon. As Duma approaches me, I say "come on Duma you can do this", and with that he stepped over the threshold. I don't think he realized what he had done until he had done it. From these images which I managed to capture, who can sense his wonderment at this new space and this new perspective. It must have been very daunting for him - such a wide-open space.

He returned shortly thereafter to the two hectare area and then later he started exploring the twenty-six (seven) hectare area. On his first proper long excursion the next day he got carried away with his new surroundings and then you could almost sense his confusion looking back at his acclimatization boma and the two hectare space wondering how to get back there. Michele (Pickover) and I were so concerned that we asked one of the carers to show him the way which he did and he never looked back after that."

Within twenty-four hours of his arrival, Duma began to audibly communicate (i.e. rumbles) with Elephants living at the nearby Welgevonden Reserve and continues to do so. "Duma chooses to be in the momentary vicinity of familiar humans without food urgency as if possibly checking in, then calmly moves off," Michele Franko observed. Despite his negative history with what we can assume to be all humans prior to arrival at the Reserve, Duma is open to positive connection with other humans. There were, however, two significant events involving humans which occurredwithin days of his arrival at the Reserve. Only twice did Duma express anything but positive attitudes to staff and both were brief and occurred shortly after he arrived at the Reserve.

Together, and overall, Duma shows both psychological balance and vulnerability. It is important to remember that the Reserve space and carers are still very new for Duma. It has been less than a year since his arrival after forty years of living in constant threat and control after the hugely traumatic event of his family's slaughter and his own terrifying abduction and subsequent violence in circus and zoo captivity. The transfer experience was rife with violence from the crowd and zookeepers underscoring the hostile environment in which he was forced to live.

Nonetheless he exhibits high emotional intelligence, acuity, and openness to social connection. Longitudinal studies on humans indicate that psychological healing and resilience after suffering from early childhood trauma is correlated with certain temperament, characteristics of which Duma exhibits. [25]

In light of observations of his centered, open view, the paucity of incidents indicating stress suggest a deep effort to heal and overcome the profound trauma that he experienced, that is, while Duma appears relatively stable and grounded psychologically, he is still vulnerable to past trauma. Both states of mind show his refined sensitivity.

It is truly amazing that Duma has been able to maintain an Elephant attitude: “They, who have suffered so much at the hands of humans, never lose the ability to forgive” but, Dame Daphne adds, “even though, being Elephants, they will never be able to forget.” [26] It is this memory of violence – and grief [27] - that is etched into mind and body which must be navigated in reintegration. External events translate directly to inside – to the very circuitry of the brain and soul.

The Shambala Group

The seventeen individuals comprising the Shambala Elephants appear to have formed a cohesive group. It does not, however, reflect traditional Elephant social structures or demographics. Relatedness varies. At this date, they might be regarded as a “hybrid” group relative to what is considered normative Elephant family structures and processes.

The core developmental experiences of these Elephants were traumatic. The adults experienced violent ruptures as infants (<three years of age) caused by one or more successive traumas (e.g., witnessing slaughter of family, terror of being killed, and loss of mother, followed by translocation, loss of homeland, premature weaning, and violent, unnatural authority figures in lieu of loving caregivers, torture, and sustained psychological and physical deprivation and pain). Mickey, Mouse, and Anna were orphaned from mass slaughter and left to develop and mature on their own without traditional Elephant neurosocial structure and processes.[28] Similar to Duma, we can assume that they were left without the vital “nesting” that all Animals are evolved to require for healthful development.[29] The nurturing constellation of mother, family and larger group was replaced with the emptiness of a life alone, controlled, and lined with violence.

[25] Werner, E. E., & Smith, R.S. (2001). Journeys from childhood to midlife: Risk, resilience and recovery. Ithaca, NY: Cornell University Press.
[26] Sheldrick, Daphne. Love, life, and Elephants: an African love story. Macmillan+ ORM, 2012.
[27] Bradshaw, Isabel Gay. "Not by bread alone: Symbolic loss, trauma, and recovery in elephant communities." Society & Animals 12, no. 2 (2004): 143-158.
[28] Bradshaw, G. A., and Allan N. Schore. "How elephants are opening doors: developmental neuroethology, attachment and social context." Ethology 113, no. 5 (2007): 426-436; Bradshaw, G. A., Allan N. Schore, Janine L. Brown, Joyce H. Poole, and Cynthia J. Moss. "Elephant breakdown." Nature 433, no. 7028 (2005): 807-807.
[29] Narvaez, Darcia, and G. A. Bradshaw. The evolved nest: Nature's way of raising children and creating connected communities. North Atlantic Books, 2023

By this definition, all adult Elephants and sub-adults not born on site are candidates for a diagnosis of CPTSD.

The histories of Addo (30 years old), Kwandwe (18 years old) and Shamwari (18 years old) are unknown, but must be understood as vulnerable to developing symptoms of trauma as they were not raised in a traditional, normative Elephant family. These experiences radically change brain function and processes including compromise of the ability to appropriately assess threat, process emotions, regulate stress, affect memory retrieval, impair impulse control, and decision making. It is notable that Mickey has stalked, assaulted, and/or killed Rhinoceroses on the Reserve.

This is completely anomalous to "natural" Elephant behaviour. The significance of these events is underscored by the series of sexual assaults and killings of the over 100 Rhinoceroses by other severely traumatized young male Elephants. [30] Evidence also strongly suggests that Anna killed a Rhinoceros during the October 2024 wildfire. The deceased Rhinoceros was found with a broken-off tusk embedded in her/his side, coinciding with Anna's missing tusk. Anna's goring of a Rhinoceros during a wildfire with enough force to break her tusk is significant. Certainly, the situation was terrifying, however, she stopped fleeing long enough to gore the Rhinoceros.

Previously, Elephants have not been observed killing any other Animal with the exception of the male-on-male killings at Addo National Park which accounted for 70-90% mortality.[31] All of these events were unheard of prior to intense manipulation and mass killing of Elephants. The mechanisms and mindsets underlying trauma-induced attacks on Rhinoceroses are unclear.

They may derive from one to three neurophysiological and psychological reasons: misperception, processing, and interpretation of Rhinoceros triggering "signal."[32] Trauma is not anecdotal among Elephants in South African parks and reserves. Symptoms of trauma – psychological states and actions which are non-normative to Elephants- are widespread. Such asocial states include multiple locales of female Elephants having been observed to kill each other and each other's children,[33] is consistent with symptoms of severe trauma (CPTSD).

[30] Bradshaw, G.A. Elephants on the Edge: What Animals Teach Us about Humanity (p. 263). Yale University Press.;
[31] Bradshaw, G.A. Elephants on the Edge: What Animals Teach Us about Humanity (p. 263). Yale University Press.; Anna M. Whitehouse, "Managing Elephants: Lessons from Behavioural Studies," in Elephant Conservation and Management in the Eastern Cape: Workshop Proceedings (TERU Report 35), ed. G. Kerley, S. Wilson, and A. Massey (Port Elizabeth, South Africa: University of Port Elizabeth, 2002), 14-18.
[32] Hormone detection and processing may have been compromised because of impairment to amygdala and hypothalamus connectivity. Second, signal transmission from the olfactory bulb and axons to the cortex and temporal lobe may have been affected. Third, cognitive-social processing may have been inappropriate or insufficient because of incomplete socialization which resulted in an inability to differentiate species-specific sexual signals from intra-species aggressive pheromone signals (Bradshaw, G.A. 2025).
[33] Y. Pretorius and M. Garai, 2012. Mabula ibid

Although the eleven Elephants born on the Reserve have not been exposed to the direct trauma experienced by their parents (Mickey, Anna, Mouse, and Gobisa and Jumbo (the latter two are not on site)), they have indirectly and are vulnerable to biological and social trauma transmission. Trauma transmits intergenerationally – socially and biologically. The offspring must also be considered potentially vulnerable to trauma given their parents' history. Because of familial and non-familial histories of trauma, there is a question and potential that intra-family tension and fighting may occur as maturation proceeds. The demographics of the Shambala group are changing. These natural dynamics have the possibility of triggering symptoms of trauma. While the process and details of Addo, Kwandwe and Shamwari's social integration into the main Shambala group have not been made available, it is positive that there does not seem to have been any negative interactions.

RECOMMENDATIONS

If you are going to take on the responsibility of becoming a truly trauma-informed leader, then you need to GROK this. To "grok". . . is "to understand intuitively or by empathy, to establish rapport with" and to empathize or communicate sympathetically". The point for you to understand, as an emerging trauma-informed leader, is that you must truly grok this paradigm shift. It is not a minor shift. It is not just about some new training on a therapeutic approach, or how to adhere to a governmental policy change. A paradigm shift is a change in the deepest set of beliefs about how the world works.

- Sandra L. Bloom, MD, international leader of Trauma-Informed movement

Overview

Overall, psychological healing involves revitalization of inner self-stability, a sense of well-being and security, and developing psychological, social, emotional, and physical abilities to function with confidence and health. From a trauma-informed perspective, this explicitly entails cultivating coping strategies and skills which help create inner and outer buffers to mitigate re-traumatization.

Psycho-physiological and physical healing are intertwined. What an Elephant experiences "on the outside" translates internally. A trauma-informed perspective connects inner experience and outer expression. A healthy environment which includes healthy relationships nurtures inner well-being. The Reserve has provided these foundational elements. The carers, for example, have noted how Duma has gained weight and strength, increased body integrity, and become more relaxed. These months of stability and security (where the only apparent threat to which he has been knowingly exposed was darting for vaccination) provide a solid beginning to his new chapter of life.

While observations by MF were limited at the time, the Shambala Elephants appear to be thriving as well. All these elements help support reinstatement of a sense of control and the security of choice which have been totally absent since infancy. Nonetheless, the traumas sustained cannot be taken lightly. Attachment ruptures such as the Shambala adults and Duma experienced as infants are deep, and in many cases may be considered almost indelible. "Almost indelible" does not mean that an individual cannot live a full, rich life imbued with love and joy with others, that is, enjoy social integration. The brain and mind can and do regenerate (i.e., neuroplasticity). The descriptor "almost indelible" is merely intended to emphasize the severity of trauma coupled with and caused by sustained and repeated violence. Recalling the image of a jigsaw puzzle from above, each Elephant is a piece seeking to "fit in" but neither they nor the rest of the puzzle (i.e., other Elephants) were cut from the same cloth. The goal, then, is to help individuals heal through the design of social and physical environments which help bridge psychological and social misalignments generated by trauma. The following recommendations are informed by this view.

Care

Time and encouragement for Duma to exercise agency and predictability are key factors. While he has shown that he has retained a core sense of self, all efforts must be made to avoid hindering the nurturance for fortifying this sense. In addition to continuing to provide consistent high-quality care, we recommend consideration of diverse nutrients used in sanctuaries to supplement the Elephants who have lacked nutritious food. Such supplements feed both brain and body. A greater sense of well-being and confidence in one's body fortifies the brain and mind and vice versa.

We recommend that care development be rooted in trauma-informed education (*Creating Presence with Nature* and *Being Sanctuary*). This will contribute to and enhance a common language which bridges observations with concepts and deepens an understanding of both human and Elephant trauma – all of which build trust. Present Elephant carers at the Reserve express this understanding. Formal science-based language and concept therefore can provide new insights as well as bridge different cultural views. Part of this learning includes understanding traditional Elephant culture – from which all Elephants derive even when captured or captive born – and the relational history of an individual Elephant. Related to care is the broader view of human involvement.

The Human Dimension

As a reserve, Shambala generally differs from sanctuary because reproduction is not prevented and space and natural browsing afford minimal human intervention and interactions. “Rewilding,” however, is not an appropriate term. The concept of rewilding itself is a misnomer. All Wildlife is wild. Elephants are wild, by definition (as opposed to domestication). The degree to which they are able to retain fidelity to their ancestral past may change as exemplified by tusklessness and widespread symptoms of PTSD. They are “wild” - on a path at the Reserve that supports their ability to exercise their Indigenous heritage. Notably, a reserve is still captivity of which Elephants are fully aware.

Captivity, by definition, impedes total agency and self-governance. It is a silencing institution. In this light, it will be necessary to consider the degree to which humans might intervene and interact, how captivity effects might be best mitigated, and whether, as in other locales, translocation be implemented if intra-group conflict arises (which is trauma-derived) and administration of GnRH to limit reproduction. These concerns and others are intrinsic to processes of rescue and release. Having these discussions through a trauma-informed education framework will help prepare for potential changing exigencies at various scales.

A trauma-informed education can also help clarify implicit human-Elephant relationships (*Creating Presence with Nature*). In these Elephants’ pasts, humans have been agents of trauma. Elephant-human relationships are therefore potential flash points for tension and re-traumatization. Because humans are ultimately “in charge” of the Elephants’ lives, there is an implicit power dynamic. In the Reserve setting, however, these relationships can serve as positive anchors and sources of trust. Humans can be tools in service to Elephants to exercise and optimize their agency and support in problem-solving. Duma appeared to realize this when he responded so positively and eagerly toward the rescue Team during his crate learning. Certainly, Duma was likely transported multiple times during his circus years, but these occasions were not salubrious, often involving pain, fear, and uncertainty.

Positive and knowledgeable trauma-informed, trust-based and trust-earned relationships are vital in times of crisis such as fleeing a fire or for some medical procedure. Critically, trauma-informed relationships are not hierarchical or power based, but partnered. As illustrated at the Sheldrick Trust, the human constellation is regarded by many Elephants as a kind of “extended family.”

Our recommendations for post-rescue and care of Elephants are for: (1) all staff and administration enroll in trauma-informed education; (2) ensure a trauma-informed framework be foundational to policy and operations, and (3) a trauma-informed

organizational/succession handbook created to ensure perpetuity. We would also like to recommend that, with their consent, the present carers participate – and more.

They have demonstrated a natural sense of trauma-informed care, sensibilities and understanding. This perspective and understanding are vital and should not be thought secondary to scientific experts or managerial agendas. When looked through the lens of Nature's non-dual ethos of nonviolence, the elements of dignity are resonant with Elephant cultures.[34] Furthermore, we would like to suggest that the process and procedures involved before, during, and after Duma's release be documented. Human experience and perspectives are inextricably intertwined. Elephant liberation is relational.

It is also our recommendation that guest access be limited to observation from the resort headquarters which will allow the Elephants and other Animals the choice to interact or not. This may be made more palatable if guests are provided with a trauma-informed curriculum as part of their experience. This is truly Elephant liberation as it dissolves assumed human privilege of "right to sight".[35]

Social Integration

Positive, willing social re-connection with land, conspecifics and others is a vital element for trauma healing. Clearly, and unsurprisingly, Duma seeks connection of some kind with other Elephants. Therefore, as stated at the Assessment onset, social integration is a central question. With the goal to minimize risk, there are two main factors for consideration: (1) expansion of space and (2) prevention of re-traumatization and physical injury.

Our recommendation is that plans and implementation for spatial expansion which might include corridors/connections to other reserves, be anticipatory and made immediately. The Shambala group is growing and expanding and in need of greater space. The maturation of the Shambala group may potentially exert a strain on relationships and inner, traumatic tears. This may lead to friction and conflict. Trauma can act as a kind of fault plane that is activated when pressure – social, physiological and physical - strain develops. Physical limits (in)directly can put pressure on social capacity, that is, the lack of environmental plasticity to accommodate natural dynamics of a growing natal family. Conversely, having greater spatial flexibility can support greater social flexibility.

[34] Bradshaw, G.A. The Implicate Moose: The Nature of Nature's Nonviolence The De Gruyter Handbook of Conflict Resolution and Peace: Living Sustainably on a Shared Planet" Douglas P. Fry and Genevieve Souillac (Eds.) 2026.
[35] Bradshaw, G.A., B. Smuts, D. Durham, 2010. Open door policy: The necessary relinquishment of humanity's "right to sight," in R. Acampora (ed). Metamorphoses of the Zoo: Animal Encounter After Noah. Rowan and Littlefield Publishers.

A second, related recommendation is that while visual contact is an obvious first step, it is likely not sufficient to evaluate the response to physical contact between Elephants. Electrical fences are insufficient to hold back an Elephant and will be an unpleasant and potentially re-traumatizing experience for all concerned if conflict arises. We suggest that heavy steel upright bars be installed which will allow natural, Elephant-initiated introductions. It will allow shock-free, infrastructure-strength-capacity and tactile exploratory touch and trunk intertwining, while preventing injury and providing a safe retreat from both sides at will (see *Maggie Joins Her Group - PAWS*) and *Kenya and Pupy's First Meeting - GSE Brasil*).Note, however, risk of injury or re-traumatization is not entirely eliminated. An Elephant may hit the bars with his/her head and tusks, but injury can be minimized. There must also be ample space for the Elephants on either side of the steel fencing to walk around, break contact and ruminate. In addition, there needs to be ample space provided if/when social integration without bars occurs.

CONCLUSIONS

Our recommendations are inspired and shaped by a trauma-informed framework. They are necessarily conservative to cultivate an open horizon for possibilities and potentialities to optimize Elephant liberation. We emphasize that positive outcomes rely on the Elephants themselves, close observation, deep listening and developing enduring trust across species-lines. Social integration success needs to be defined by what brings individual Elephants the most benefit. In other words, what may turn out to be the most beneficial social grouping(s) from the Elephants' point of view may not be what humans predict or seek. It is unclear whether Duma will choose to integrate with the Shambala group, or stay alone. The Elephants must take the lead. Pivotal to this process will be the insights of the experienced trauma-informed carers who spend detailed and extensive time with individuals and the group. The Shambala Reserve project is a beautiful exemplar of what reinstatement of Elephant liberation means.

GLOSSARY

Rewilding is the large-scale restoration of ecosystems to a point where nature can take care of itself. This approach aims to reinstate natural processes and, where appropriate, responsibly reintroduce ‘extirpated’ (meaning locally extinct) species. Rewilding is a human intervention and involves a degree of risk. While losses do occur, every precaution is taken throughout the process and follows thorough planning (from *African Parks - Rewilding to Restore Ecosystems*)

Reserve is a protected area established for the conservation of Wildlife and their natural habitats.

Zoo is a facility that collects Wildlife for revenue and gain through forced mating, selling Animals, and public display.

Sanctuary is a facility that provides lifelong, safe refuge for rescued Animals.

Life Arc refers to the overall trajectory of a person's life, from birth to death, encompassing major milestones, experiences, and changes. It's a way to visualize and understand the journey of life, including its ups and downs, and how it shapes an individual.

Stress is what we experience when there is a differential between psychological and physical expectations to which we individually evolved and the conditions we experience.

Trauma is a stressful event (or succession of events) that is so extreme, so overwhelming, that it exceeds psychological and physiological capacity. A traumatic event is one where the individual cannot adapt, accommodate or escape from these psycho-physiological assaultive conditions
(e.g., abduction, beating, deprivation, torture) which include fear of death or that of someone close, torture, other violence, and abuse.

Post-traumatic stress disorder (PTSD) is a formal diagnosis for resultant symptoms that include depression, hyper-vigilance, nightmares, inability to regulate emotions, extreme fear, disconnection from others and environment, dissociation, disorientation, and physiological ailments.

Complex Post-traumatic Stress Disorder (CPTSD) results when traumas are multiple and/or prolonged and occur at a young age.

Social integration is regarded here as the physical encounter of two or more individuals who have sustained severe trauma and/or non-normative (traditional) Elephant rearing and family experience.

Hybrid groups are absent normative structures or demographics and relatedness is varied. The Shambala group may be regarded at this date to be a “hybrid” group relative to what is considered traditional Elephant family structures and processes. Individuals who live together but have not been brought up together or come from very different areas and lineages (compared to traditional families and rearing).

Risk mitigation is the process of identifying potential risks and developing strategies to reduce or eliminate their negative impact on a project, business, or other endeavor. It is a proactive approach that involves assessing risks, implementing preventative measures, and creating contingency plans to minimize potential harm.

Objectification is defined as the treatment of humans or Animals as objects; treating others as mere things or tools that can help in one’s goal achievement while denying others’ autonomy, needs and feelings.

Trans-species psychology reflects the (neuro)scientific understanding that a common model of brain, mind, behaviour and consciousness is common to all species.

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G. A. Bradshaw is the founder and director of The Kerulos Center for Nonviolence (www.kerulos.org). She holds doctoral degrees in ecology and psychology, a master's in geophysics, and was the first scientist to recognize and diagnose CPTSD in Elephants, Chimpanzees, Pumas, Bears, and Orcas which launched the field of trans-species psychology. She is a certified mindfulness and meditation teacher. Her books include the Pulitzer-nominated *Elephants on the Edge: What Animals Teach Us about Humanity*; *Carnivore Minds: Who These Fearsome Beings Really Are*; and *Talking with Bears: Conversations with Charlie Russell* and *The Evolved Nest: Nature's Way of Raising Families and Creating Connected Communities*. She is the primary carer for rescued colonized Animals including disabled endangered Tortoises and native Wildlife at Grace Village, Oregon, USA.

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Michele Franko has cared for rescued Elephants in sanctuary for fifteen years in the U.S., India, and South Africa. Prior to this work, Michele served as a California State Humane Officer to investigate criminal animal cruelty which included active rescues of Animals in distress and crisis, and monitoring and inspections of circuses and rodeos. Having investigated and subsequently prosecuted many cases of violence, abuse and neglect, she began work as an intern with The Kerulos Center for Nonviolence where she studied and integrated psychological trauma and trauma-informed care into her work with Elephants. Since 2009, Michele has continued in this role as a member of the Stewardship council.