Stripes Faded, Barking Silenced: Remembering Quagga

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Abstract: *The death of the last quagga on August 12, 1889 represented the loss of a long-term resident of the Artis Magistra Zoo in Amsterdam, at the time a private institution accessible only to members. The mare's death was not recognised at the time as signifying the extinction of the quagga, largely due to the vague and general usage of the term 'quagga'. The delay in understanding the significance of this death, and the way in which quaggas rapidly disappeared in the wild in southern Africa in the nineteenth century, have been overshadowed in scientific and historical accounts by debates concerning the classification of the quagga and its re-creation by selective breeding from plains zebra stock. This paper examines quaggas in terms of their relationships with each other and with other animals on the southern African plains, considering how they have been remembered in different contexts and reflecting on what has been lost in the light of attempts to erase and redeem their extinction.*

Keywords: *Extinction, accretion, quagga*

Artis and the Last Quagga

The Zoological Society Natura Artis Magistra ('Nature is the teacher of art') was founded in 1838 by three wealthy citizens of Amsterdam. Membership was solicited by way of substantial financial donations from fellow citizens, and allowed access to the Society's zoological gardens. Membership served as a symbol of status for the affluent middle class, and provided funds for the acquisition of live animals, cabinet displays and preserved specimens, collected in the name of promoting natural history knowledge. Expatriates donated animals from the Dutch colonies, and ship captains facilitated their transport to Amsterdam, in exchange for honorary membership and privileges.

Commencing with a few monkeys, deer and parrots, plus the donated cabinet collection of local taxidermist Reindert Dragon, the Society expanded its enterprise the following year by purchasing the entire menagerie of travelling showman Cornelis van Aken. The fact that the van Aken family's menagerie was well-known in Europe and had been patronised by members of the Russian, German and Dutch royal families contributed to the prestige of the Society. The menagerie consisted of an elephant, lions, a panther, a tiger, a lion, hyenas, polar bears, brown bears, a zebra, llamas, a kangaroo, a black wildebeest, monkeys and a Boa constrictor. While the Society's collection of live animals was added to by acquisitions from the colonies, it was the form of the menagerie that shaped the way the animals were seen: as the possessions of an élite, desirable group, to whom the pursuit of zoological knowledge and natural history was thus largely confined. In 1851 the Society was reported to have acquired their first quagga. In that same year, in the face of dwindling patronage and funds, the Natura Artis Magistra's gardens and exhibits were opened to the general public, but only during the month of September. This arrangement continued until 1920, when the gardens were open year-round. The entrance to the gardens featured three large ornate iron gates upon which was written 'Natura Artis Magistra'. As only the middle gate was usually opened, visitors walked under the 'Artis' component of the sign, with the majority taking this to be the name of the zoological gardens, with the facility quickly becoming known simply as Artis or Artis Zoo.

There is conflicting evidence regarding when the last quagga known to live and die came to be held at Artis. One account has the quagga as transported as a foal by ship from the Cape of

Good Hope to Antwerp, and then purchased by Artis Zoo early in 1872. In his *Note to Visitors*, the Dutch zoologist and natural historian Tiberius Cornelis Winkler described the quagga as one of the jewels of Artis:

> This beautiful animal is a mare: it is very tame, and can even be stroked by strangers. I've done it more than once, but at the time it is true that her caretaker was standing next to me with a piece of bread in his hand. (1)

Artis had kept a few quaggas since 1851, stabled alongside plains and mountain zebras, an onager or wild Persian ass, and the offspring of mountain zebra/plains zebra matings. The stables were beneath the zoo's library, and members of the public were allowed to walk through the stables in September if accompanied by a Society member. The stable served as a living cabinet, allowing the visitor to distinguish between the equids on display and to discern the similarities and differences between them. Such a display provided a resource and point of reference in the debate amongst European zoologists and other observers surrounding the classification and taxonomic status of zebras and related equids, a debate that focused on skins, stuffed specimens and captive animals in zoos and museums rather than on experiences in southern Africa.

Little detail about the death of the last mare on August 12, 1889 in the Artis Zoo stables has been recorded, except that very few people had seen her in the last year of her life, and that the death prompted correspondence by the zoo to associates in southern Africa requesting a replacement quagga. By this time neither quaggas nor plains zebras could be found in the Cape Colony, but it was believed by some British hunters that both animals could be found to the north and east of the colony, 'closer to the interior' (Harris 7). The Khoekhoe and Dutch settler practice of referring to all zebras as quaggas proved to be a point of confusion in communicating with British hunters and administrators. Around this same date Henry Anderson Bryden had published his account of hunting and natural history in the colony, declaring the quagga to be extinct. Despite this, scientific interest in Europe continued to focus on the question of its taxonomic relationship with mountain and plains zebras. By the time of the 1900 London Convention for the Preservation of Wild Animals, Birds, and Fish in Africa, the quagga's extinction had been accepted internationally, along with that of the blue buck and the Cape lion. In 1904, the natural historian Graham Renshaw published a paper detailing his examination of the holdings of European zoos formerly exhibiting live quaggas and of museums

with quagga skins and skeletons, concluding that only a few quaggas had ever survived for long in captivity, and that no successful quagga breeding had ever taken place while in captivity (177-180). He confirmed the mare at Artis Zoo as the last known quagga in the world. No photo of this last quagga in life can be found. While the Society sought to preserve her skull and skin, the rest of her skeleton was lost. The mounted specimen, along with those of a Great Auk and a Norfolk Island Kaka, were slated to be sold by auction in the 1930s, when the Society was faced with the prospect of bankruptcy, before the Municipality of Amsterdam and the Province of North-Holland bought the zoo and all its possessions in 1939, renting them back to the Society for a token amount. Since 1984, the mounted quagga specimen has been displayed at the Naturalis Biodiversity Centre in Leiden.

In 1988 the Dutch Postal & Telecommunications Service (PTT) issued a stamp depicting an image of the stuffed and mounted quagga as part of a set commemorating the 150th anniversary of the establishment of the Zoological Society Natura Artis Magistra. The other two stamps depicted an orangutan and a West Indian manatee, the three together recalling the Netherlands' colonial conquests in the Dutch East Indies, West Indies and southern Africa.

Extinction and Memory

The way in which quaggas are remembered in the Netherlands, as colonial discovery and colonial loss, shapes their meaning as extinct animals in a broader context. Their significance as colonial exhibit and object of administrative and scientific classification underpins the way their loss as a living species is felt. Skins, pictures and stories take on a particular value in the way they stand in for what is no more. Souvenirs are instituted as memorials, repositories of a knowledge articulated from a space that conceals the traces of colonial power and violence while retaining its authority. In the absence of living quaggas, the figure of the extinct quagga occupies a space produced by science and art, a space that reproduces it as vulnerable in relation to colonial settlers and to other equids, in particular plains and mountain zebras.

Quaggas, however, are also historical objects: they were real animals living in southern Africa for over one hundred thousand years, their lives influenced by their family groups, the

animals they grazed with, their predators, and their seasonal migrations. Over successive generations, quaggas accumulated knowledge about their times, spaces and relationships, and what was required to survive in their environment. In turn quaggas were remembered by these times, spaces and relationships.

The Karoo

While the Artis Zoo commemorates the extinction of the quagga by way of a specific date and space, the Karoo remembers quaggas in the fullness of their lives, and in their engagements with other living things in their habitat. It remembers time before quaggas as well as time after. The Karoo, an arid to semiarid geographic region of South Africa's Cape provinces, derives its name from the Khoisan word meaning 'land of thirst.' The area contains no surface water, its vegetation consisting of dwarf shrubs and grassland. The Karoo occupies just under 400,000 square km, about one-third of the total area of South Africa. Quaggas lived in what is now known as the Nama Karoo biome, west of the Drakensberg mountain range and south of the Vaal-Orange river system. It is an area in which droughts are common, and both seasonal and daily temperatures fluctuate considerably. The soil is shallow, weakly developed and rich in lime. Most of the grasses and shrubs are deciduous in response to rainfall events. The rocks of the Nama Karoo contain fossil records dating back more than 3 billion years. The area is rich in dinosaur and mammal-like reptile fossils, providing substantial evidence regarding the origin of mammals. The rocks and fossils of the area also indicate the diverse environments the Karoo has experienced over hundreds of millions of years (Dean and Milton 164).

Historically, during the winter months of May to July, vast herds of springbok, numbering in their millions, migrated west across the Nama Karoo to the Succulent Karoo, in order to take advantage of the regular rains. Between August and October the herds would venture back into the Nama Karoo to meet the monsoonal summer rains. Quaggas and black wildebeest would join the springboks on these annual migrations, their numbers lost amongst the sea of brown and white antelopes. This moving mass of ungulates would regularly transform

the surface of the Karoo, reducing the cover of grass and increasing the relative abundance of small shrubs.

San people hunted and gathered in the Karoo, long before the arrival of Bantu-speaking nations in southern Africa, and thousands of years before the arrival of Europeans. Khoekhoe people, coming from Botswana about two thousand years ago, moved regularly within the southern and western areas of the Karoo in order to access grazing land for their sheep, goats and cattle, and hunted antelopes, zebra, wildebeest and quagga to supplement the meat and milk obtained from their livestock (Dean and Milton 171).

The Dutch East India Company established a supply point in southern Africa in 1652, which quickly became a settler colony, with Dutch settlers establishing farms to service the supply point. Coastal agriculture was at first supplemented with livestock traded from Khoekhoe people. The expansion of settler farms toward the interior tablelands led to the displacement of Khoekhoe people from their grazing lands and the consolidation of European landholdings. In practice this meant that vast areas of land were fenced in for cattle and sheep grazing. Khoekhoe people could no longer practice their mobile pastoral way of life, and were impelled to work for the colonists.

From the middle of the 17th century until the middle of the 19th century the Karoo was witness to a process of accelerating division and exploitation, as the seasonal grazing of antelopes and other ungulates and the small-scale, mobile grazing of Khoekhoe cattle ceded to permanent, intensive livestock grazing, which reduced the grass cover, disturbed the ground surface through constant trampling, and inscribed footpaths through the grazed areas (Roux 88).

The Karoo gathers memories and connects times through a process of accretion, acquiring layers of matter through millions of years of change, through drought and rainfall events, through the changes in vegetation manifested in response to the movement of grazing herds in winter and in spring. The fossils of prehistoric and historical animals that lived on the Karoo are remembered not only in the geological layers lying under the fences and built environment, but also in the way these animals and the Karoo contributed to the making of each other over time and generations.

The Lives of Quaggas

The story of the quagga is a story cobbled together from a paucity of accounts, some closely observed, others secondhand, and artefacts. The majority of these accounts came from British administrators, and from those termed sportsmen, privileged visitors who explored and hunted throughout the Cape Colony. Quaggas were a type of equid related to plains and mountain zebras native to the Karoo plains. Adult quagga stood about 130cm in height and about 250cm in length. Some descriptions of them by European hunters and settlers who witnessed them living on the Karoo have emphasised their physical beauty, noting the cinnamon and cream stripes on the front part of their bodies, which widened in their midsections, fading to a chestnut brown or fawn on their hindquarters and rumps, and with bright white tails and legs (Harris 7, Murray 429). Others have compared them unfavourably with plains and mountain zebras (Bryden 101). Quaggas lived in herds of between 20 and 40 individuals, with one dominant stallion. Their bark is remembered only in their Khoekhoe derived name, onomatopoeically representing their calls. European visitors have described the quagga's bark as resembling a dog's bark rather than the neighing of a horse or the braying of a donkey. The call of the plains zebra is said to be similar. Quaggas were vocal animals, barking to acknowledge, summon, and warn each other. Males in each group tended to graze and spend their time together, as did the females. The oldest females in the herd would take the lead during migration times. Keeping the quagga group together appeared to be an important concern: no stragglers were left behind, and the group would slow their pace to compensate for any injured members when on the move (Rodriguez).

Within their range on the Karoo quagga grazed alongside black wildebeest and ostriches, a phenomena noted by Khoekhoe and Europeans. The arrangement was said to offer the best protection against predators such as hyenas, hunting dogs, cheetahs, leopards and lions, with the sharp sight and elevated perspective of the ostrich complementing the wildebeest's sophisticated sense of smell and the quagga's acute hearing. In addition, quaggas were quick to bark out warnings, and older males, capable of inflicting serious injury with their sharp hooves, would readily kick out at most predators other than lions. This observed behaviour was utilised by Khoekhoe herders who sometimes caught and kept quaggas to graze with their herds, in

order to warn of, and warn off, hyenas and hunting dogs. Quaggas tended to assume priority of grazing in newly approached grassland, as wildebeest did not possess the long front teeth of quaggas capable of lopping taller tufts of grass and instead had mouths better suited for grazing on short grass and new shoots. However, wildebeests were better at detecting sources of casual water on the Karoo, an extremely valuable skill in the land of thirst. At night, quaggas would move out of areas of long grass to shorter pastures where there was less chance of ambush by predators. One or more quaggas would stay awake while the herd slept.

The establishment of the Cape Colony changed the lives of quaggas forever. As the Dutch settlers established farms, quaggas were pushed to the fringes of the Colony and outside it. Although still in observably large numbers, the quaggas experienced disturbances in their attempt to travel west in the winter and in returning to their summer grazing grounds. The mass-migration of the Voortrekkers into the Greater Karoo in the 19th century dramatically worsened the fortunes of the quaggas. The rapid establishment of farms proved to be the tipping point. Fences excluded them from prime grazing and watering sites. Displaced within their range quaggas became more vulnerable to their natural predators, to which was added the new European settlers, who killed them both for sport and with the stated intention of protecting their livestock from competition for grazing land. Quaggas also came to be seen as a readily available source of meat for the settlers' Khoekhoe workers and later for their slaves from Mozambique and Madagascar. Where Khoekhoe had hunted quagga with spears in their travels on foot, the new settlers chased them on horseback with shotguns and rifles, killing them in large numbers in order to build up stores of meat and hides. Black wildebeest numbers were decimated at the same time. By 1860 only a small relict quagga population survived near the Vaal River at the northern limits of its range, and the last wild quaggas were caught around 1870. A severe drought in the late 1870s led to the deaths of the remaining few quagga.

The Quagga Project

Very little research on quaggas in the last thirty years has failed to address the Quagga Project, an enterprise that claims to be successfully reversing the extinction of the quagga. The project

was initiated by the German-born South African taxidermist Reinhold Rau in 1986. Rau had collected small pieces of quagga flesh attached to a museum hide he was repairing and had sent them to genetic scientists in the US in 1981, who over the next four years successfully extracted portions of DNA from the quagga tissue. A related project comparing proteins in quagga and plains zebra suggested that the two species were closely related, with quaggas likely to be a subspecies of plains zebra. Rau made a connection between these findings and the work of Heinz and Lutz Heck in Germany in the 1920s, where they undertook a process of selective breeding which they called 'breeding back' to produce Heck cattle and Heck horses, animals resembling, respectively, the extinct aurochs and tarpan. Rau undertook a systematic but similar program of breeding using carefully selected plains zebras with the ultimate aim of producing, over a number of generations, an animal that would look like the quagga. Rau argued that as quagga were merely a sub-species of plains zebra, then producing such an animal would indeed reverse the quagga's extinction. It is the intention of this project to place selected Rau quaggas in available areas of the Karoo, along with black wildebeest and ostriches, with the stated purpose of rectifying the absence of the quagga from the plains. While scientists have debated and disputed the legitimacy of the Quagga Project's methodology, the cogency of the initial and subsequent DNA analyses, and the certainty of quagga taxonomic classification, the project continues to garner international interest, and is promoted both in its website and Facebook page, and by popular media sources as indeed reversing extinction.[1] To quote Rau: 'The quagga is a quagga because of the way it looked, and if you produce animals that look that way, then they are quaggas. Finished.' In line with the Hecks the animals produced are now known within the project as Rau quaggas, in memory of Reinhold Rau. Carol Freeman has critically examined the quagga, as well as the thylacine, in terms of their comparative states of existence as animals in the wild, isolated animals in zoos, and as sources of DNA and potential new life. She argues that on its website the Quagga Project displays specious reasoning in conflating notions of breeding back with strategically selected analyses of mitochondrial DNA, and while the question of whether the project is developing a tourist attraction or filling an ecological niche remains unclear, what is more certain is that a number of ethical issues have been ignored in regard to the welfare of the animals involved (235).

In examining the concept of how Americans have interacted with and responded to sites of violent and tragic events, the geographer Kenneth Foote considers how these 'shadowed

grounds' are either memorialised, ignored or erased. He argues that the shaping of these landscapes involves the specific ways in which violent events are remembered or forgotten. He describes the appending of smaller, specific memorials to established memorial spaces as symbolic accretion, reflecting on how national monuments, battlefields and courthouses, among other spaces, have become the sites of smaller memorials to more specific causes and perspectives, sometimes corresponding with and sometimes contradicting the perspective of the original monument or memorial. In extending Foote's formulation, Owen Dwyer contends that symbolic accretion produces a politics of memory shaped by the interaction of various memorials and acts of remembering. In particular it is predicated upon the reciprocal condition of place and memory (431).

The introduction of Rau quaggas to the Karoo can be seen as an attempt to transform the way that the extinction of the quagga is remembered, and to write over the way that the Karoo remembers the quagga. The presence of these selectively-bred plains zebras on the Karoo displaces the absence of the generations of quagga who lived on the Karoo, the seasonal migrations they undertook in company with springbok and black wildebeest, and the violence involved in their extinction. Such an act can be seen as formalising the way quaggas are remembered, and indeed forgotten. Inasmuch as symbolic accretion is articulated through a place, the Karoo can be seen to be memorialised as the site of an apparently heroic redemption in the form of the re-placing and resurrecting of quaggas, while obscuring the extinction of the quagga on the Karoo. While the Rau quaggas are living creatures rather than inanimate markers of a specific perspective and memories, they serve a similar social and cultural function in temporally and spatially fixing the memory of quaggas in southern Africa, and in marking a future to their extinction. Indeed, despite being alive the Rau quaggas remain comparatively fixed and static in terms of time and space, unable to undertake the seasonal migrations experienced by quaggas in company with other animals on the Karoo, and unable to accumulate the knowledge gained over seasons and generations. The symbolic accretion enacted by the Quagga Project stands in stark contrast to the layers of bodies, sediment, times and spaces that the Karoo accumulates in remembering the lives of all its inhabitants.

Remembering Quagga

The currency of extinction is knowledge manifested by artefacts – photos, objects, stories. The value of such currency relies on the owner's removal from any context in which they might be implicated in causing the extinction. The desire for extinction, that is, the desire for the ability to enunciate extinction, is a desire for knowledge in the face of the unknown. Extinction is enunciated from a dominant space of representation rather than from a dominated representational space. However, the writing and official recording of extinction constitutes an inscription temporally and spatially after the encounter of absence, after the disappearance: extinction writes into and speaks into the face of absence and loss. The extinct animal as historical object answers the cultural demands of the enunciating subject. The gap between the death of the last quagga on August 12, 1883, and the announcement of the quagga's extinction at the 1900 London Convention for the Preservation of Wild Animals, Birds, and Fish in Africa provides an insight into colonial attitudes towards animals. The announcement is made as a sign of colonial authority, enunciated outside the colony, with extinction now articulated as a sign of concern, albeit a concern for the loss of animals for sport. The quagga's appearance on the 1988 Dutch stamp constitutes a further removal from the violence of extinction.

Not only does extinction mark the end of the existence of a group of animals, it also marks the end of the practices involved in encountering, living with, and bringing about the end of those animals. The absence of living together ensures that no further harm is done, other than to the possibility of future generations of the animals and the lives of other species it interacts with and facilitates. The last quagga's death – a death neither witnessed nor foreseen – disposes of this passing. Plans to eventually reintroduce desirable offspring of the Quagga Project to the Karoo beg a multitude of questions, not the least of which is the nature of the Karoo in the present day.[2] In placing selected Rau quaggas on the Karoo, the Quagga Project can be seen to be conflating the logic of the zoo or museum with that of the natural habitat. Plains zebras that look like quaggas function collectively as a living cabinet, attempting to both act as reference and redeem an act of wrongdoing, but ultimately unable to stem the flow of debate over the animals' taxonomic classification.

Rau's Quagga is not connected to or remembered by August 12, 1889; indeed the date is obscured by it, and quaggas are now enmeshed within the progress of the Quagga Project, a celebration of the victory of an imagined life over an imagined death, re-articulated as Year Zero, Ground Zero. It is the site of the production of 'a wounded life severed from the connectivities of emplaced kin and habitat, and from the traditions of behaviour learned and adapted … across innumerable generations' (Chrulew 152).

Just as the extinction of the quagga is inexorably linked to colonial violence and interdictory practices, the Quagga project proceeds through a process of generational interdiction, producing reject animals bound for reserves and safari parks administered by hunting associations that provide some of the funding for the project, and to sustain the hunting practices that replicate the practices of colonial sportsmen in the past two centuries (Max 1).

August 12, 1889 endures as an indeterminate point in the narrative of the quagga. It is a time for remembering migration as a way of passing on quagga knowledge, for remembering winter and summer as meaningful on the Karoo, for remembering the quagga's connections with the Karoo, with its family group, with the wildebeest and ostrich, and with its predators, including humans and horses. We consider a loss far greater than the loss of the mare at Artis. We consider the loss of what Scott Weidensaul has described as 'a unique end point that cannot ever be truly replicated. The quagga possessed an indefinable 'quaggaishness' that stemmed from millions of years of evolutionary history, filtered through the demands of habitat and environmental conditions that no longer exist (211).'

Notes

1. Cladistic and mitochondrial DNA analyses continue to provoke much debate in regard to the quagga's taxonomic status. While Bennett's cladistic analysis concludes that quaggas were specifically distinct from plains zebras, indeed indicating they were more closely related to horses (285), Higuchi *et al*'s mtDNA analysis identifies significant similarities between plains zebra and quagga sequences, leading them to conclude a sub-specific relationship (283). Leonard *et al* argue that their analysis of DNA and fossil evidence, revealed that quaggas displayed minimal genetic diversity, and they could find no shared haplotypes (gene sequences inherited together from a single parent) between quagga and plains zebra DNA. As they were living in areas adjacent to each other, there would be some expectation of interbreeding had they been sub-species (292-293). Azzaroli and Stanyon have also stated their doubts concerning the validity of conclusions drawn from mtDNA analysis (435).
2. Photographs of foals born between 2010 and 2012 to selectively bred Rau quaggas, including Henry, have been published on the Quagga Project website (http://www.quaggaproject.org/quagga-whatsnew.htm). They indicate that some progeny resemble their parents and look like quaggas.
3. The majority of the Nama Karoo region continues to be used for livestock grazing, and significant areas have been partitioned and fenced to facilitate this purpose. In addition to the extensive damage caused by heavy grazing, the biodiversity of the region in its present state faces the threat of further diminution and degradation as a result of the use of poisoned carcasses (to kill livestock predators), agriculture, open-cut mining, invasive species, and the taking of endemic plants and reptiles for the exotic pet trade (Vernon 75).

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