

The First Beutelwolf: How Berliners were taught to see the thylacine

Katrina Schlunke^{1*} and Anja Schwarz²

¹* University of Tasmania, Australia and University of Sydney

² University of Potsdam, Germany

Received: 5th Aug 2024

*Email for correspondence: katrina.schlunke@utas.edu.au

Accepted: 2nd Oct 2024

Citation: Schlunke, K. and Schwarz, A. 2025. The First Beutelwolf: How Berliners were taught to see the thylacine. *Journal of Natural Science Collections*. 13. pp. 3-15.

Abstract

This article examines the ways in which visitors came to see the Beutelwolf (thylacine) that is in the collection of the Museum für Naturkunde (MfN) in Berlin. We analyse nineteenth-century zoo-related materials, key popular German natural history writings, and historical museum guides to show how the emphasis on 'seeing' specimens, combined with the production of images inside and outside the museum, created a particular view of the species as 'primitive' and destined for extinction due to its inability to adapt to the modern world. We conclude with some suggestions for how contemporary representations of extinction in the MfN might need to be reconsidered in the light of these findings.

Keywords: Beutelwolf, Tasmanian Tiger, thylacine, Berlin Museum für Naturkunde (MfN), visuality, extinction

Introduction: the Wall of Life?

We have come to Berlin's Museum für Naturkunde (MfN) to see the thylacine. Or as it has also been called: coorinna, loarinna, laoonana, lagunta, or Tasmanian tiger. Here, it is called Beutelwolf ("pouched wolf"), a name that curiously combines notions of the fearsome Eurasian wolf looming large in the German imagination with the soft pouch characteristic of marsupials. A mythical animal in more ways than one.

Up the building's stately staircase and through the Dinosaur Hall, we turn left to look for the animal on display in the MfN's Evolution in Action Hall. But the first thing that catches our eye, at twelve metres wide and stretching across almost the entire hall's entrance, is the Biodiversity Wall, one of the museum's centrepieces (Fig. 1). The Wall is a visual delight. No taxonomical principles – Linnaean, ecological, genetic or otherwise –

appear to organise its presentation of 3,000 animal specimens against a neutral background. Instead, museum visitors are invited to be overwhelmed by the mass of animal bodies alone, their abundant beauty and dazzling diversity (Toepfer, 2019; te Heesen, 2017). Popular in natural history museums around the world, such as the American Museum of Natural History, biodiversity displays are a particularly apt example of what Pollock and Zemans describes as the specific visuality of museums, where "knowing, seeing, visually mastering leaves the viewer centered and disembodied in a perfect fantasy" (2007, p. 13).

Thus aestheticised, the animal bodies displayed in Berlin's Biodiversity Wall are regularly recontextualised in the political sphere and read as symbols of humanity's threat to nature. As Johannes Vogel, the museum's director likes to stress, "even [former] German Chancellor Angela Merkel gives her political speeches on biodiversity and climate protection in front of the Berlin



© by the authors, 2025, except where otherwise attributed. Published by the Natural Sciences Collections Association. This work is licenced under the Creative Commons Attribution 4.0 International Licence. To view a copy of this licence, visit: <http://creativecommons.org/licenses/by/4.0/>



Fig. 1. Biodiversity Wall at the Museum für Naturkunde Berlin (DE-MUS-813712). © Carola Radke, MfN.

Biodiversity Wall" (Vogel, 2016, p. 237). Both museumgoers and politicians, then, value the wall for the intense affective responses it evokes. And for many of them, the pleasure of this visual feast is mixed with the knowledge and sense of grief that so many of the ecologies that these creatures are part of are under threat and that many of the animals are endangered (Pike, 2017; Massol de Rebetz, 2020). Building on these responses, the wall acts a prominent symbol of the museum's proven and sustained commitment to act across a range of platforms as a lobbyist on behalf of the Earth's biodiversity in the face of the unfolding Holocene extinction ("Strengthening Engagement").

What the "hyperbolic optics" (Bezan, 2019, p. 222) of the wall does not invite us to see, however, is the role of natural history in colonial practices that ultimately contributed to species extinction, nor does it encourage conversations about how natural history museums have historically naturalised and depoliticised the "impact of anthropogenic change upon nonhuman life" through their exhibition practices (Bezan, 2019, p. 222; see also pp. 214, 224 and Westergaard, 2023, p.10). This past, we will argue, continues in the MfN's current practice of exhibiting endangered animals, particularly the Beutelwolf. In that sense, the MfN is very much like the Humboldt Forum: the institution that exhibits Berlin's most prized ethnological collections, acquired over the long nineteenth century from peoples whose cultures were

thought to be threatened by an encroaching Western modernity, and which today styles itself as a "site of world culture" (Parzinger, 2011, p. 6). The MfN also 'worlds': The pedagogy of its exhibitions allows us to see the minerals, plants and animals according to the universalising ordering principles and narratives – evolution, ecosystems, climate change or species extinction – of the natural sciences. And like the ethnological collections on display in the Humboldt Forum, the MfN has only recently begun to acknowledge imperial expansion and colonial violence as the underlying logic that brought many of these riches to Berlin. But while the Humboldt Forum, whose controversial collections are currently at the centre of an intense reckoning with Germany's colonial past, is reluctantly becoming the 'forum' of public discourse that its name suggests, the MfN, although like other natural museums increasingly committed to researching its colonial past ("Colonial Contexts"; Das and Lowe, 2018; Ashby and Machin, 2021), is not imagined in this way. Or perhaps not yet.

Seeing and Unseeing Double Death

Just fifteen metres from the Biodiversity Wall there is a Beutelwolf mount (thylacine; known in popular English as the Tasmanian Tiger) near the very end of the Evolution in Action Hall, opened in 2007 (Fig. 2). The mount on display is just one item from the museum's larger collection of skins, bones, mounts and organs of the species, whose last known living individual died in 1936. It's role in



Fig. 2. Beutelwolf in the “Extinction through Human Activity” cabinet in the Evolution in Action Hall at the Museum für Naturkunde Berlin (DE-MUS-813712). © Katrina Schlunke

the exhibition is carefully scripted. From their encounter with the Biodiversity Wall, visitors are invited to journey from diversity to extinction to reflection, through the introduction of key ideas such as evolution, mutation, variability, convergent evolution and displayed busts of major contributors to evolutionary thought, such as Carl Linnaeus, “the man who systematised life” and Charles Darwin, who demonstrated diversity and adaptation through “Darwin’s finches”. There is also a panel dedicated to Amalie Dietrich, an “unusual woman,” botanist and researcher who collected in Australia and Tonga between 1863 and 1873. What the panel chooses not to mention is Dietrich’s involvement in the looting and trade of human remains from colonial Queensland (Turnbull, 2020).

Like other animals shown in the hall, the Beutelwolf is displayed in a large original glass cabinet from 1889, used to emphasize the role of the “extensive scientific collections of the Museum, compiled over several hundred years” (Damaschun, Faber and Steiner, 2019, p. 75). It sits between an extant but endangered Siberian tiger and the extinct quagga while above all three, perch two extinct huia wattlebirds. The cabinet is titled “Extinction through Human Activity”, and the interpretive stand in front of it offers more information on “When the Natural Habitat Shrinks”. Alongside the now iconic film footage of one of the last thylacines in captivity, walking around its cage at the Hobart Zoo in 1933, we are told that “in many cases human activity has directly caused the extinction of species”. The example given is of the huia wattlebird, which was hunted and traded mainly for its feathers with the last official sighting occurring in 1907 (Boyle, 2019, p. 223). The text goes on: “Often the destruction of habitats

occurred so quickly that organisms had no time to develop survival strategies. The South African quagga, and the Beutelwolf are examples of animals that were unable to withstand the new environmental conditions that humans made”.

The sentence is curiously unspecific in its reference to human-made “new environmental conditions”. It glosses over the specific geopolitical processes of European settler colonialism that resulted in this destruction of habitats over the past two hundred years. After all, quagga, huia and Beutelwolf had coexisted with particular groups of humans for millennia without either species becoming extinct. The text also fails to mention that the thylacine, like the quagga, was hunted, and that a bounty was put on its head by early colonists. Thylacines were also traded to menageries, museums, circuses and zoos. Dead thylacines were actively sought for museum displays and collections and as their numbers dropped, the value of thylacines in the global network of museums went up (Möller 1997, pp. 133–137; Maynard and Gordon, 2014, p. 28; on a similar shift in value of Galápagos tortoises, see Bezan, 2019, p. 232). Instead, the panel’s projection of a universal human responsibility for species extinction ties in well with a series of topical questions printed on the back of the thylacine’s display case. The questions: “What is a human being?” and “What does nature mean to us?” (all translations from German are our own) invoke a shared positionality of all humans in relation to nature. They leave no room, for example, for the articulation of the specific cultural relations that Tasmania’s Indigenous palawa people have maintained with this particular animal, regardless of its extinction. Furthermore, the display text seems to suggest that it was a deficiency in the thylacine itself that left this particular species “unable to withstand the new environmental conditions” in which others thrived. Ashby has warned that such a view of Australian marsupials as “inevitably doomed to be outcompeted by a superior evolutionary force from the north” has real implications for conservation efforts today (2021, p. 43). He argues that species deemed inferior are unlikely to receive the same protection, and museum displays may be “accidentally complicit” in perpetuating this view (Ashby, 2021, p. 36).

The MfN’s Beutelwolf display thus invites us into a particular process of seeing that encourages the viewer to know (through seeing) this Beutelwolf as yet another extinct animal, aesthetically contained within a procession of ordered mounts. Indeed, processes of visibilisation have been

identified as crucially structuring extinction exhibits across different contemporary natural history museums (Guasco, 2020; O'Key, 2021). In a discussion of the Pinta Island tortoise Lonesome George, exhibited in the Hall of Hope at the Charles Darwin Research Centre (Santa Cruz, Galápagos), Bezan argues that visitors' understanding of species extinction is shaped by a number of factors, including, crucially, exhibition technology and biological discourse, "which together sketch the parameters of what we can see – *and consequently of what we also fail to see* – of the anthropogenic processes that contribute to the loss of species" (2019, p. 214; emphasis in the original). Such exhibits, Bezan argues, channel visitors' responses to "the macrohistorical processes of extinction that, due to their scale and complexity, evade full comprehension" (*ibid.*).

Like Lonesome George, visitors to MfN's Beutelwolf display are invited to see the animal as doubly dead in Deborah Bird Rose's sense of the term. Placed next to footage of one of the last known living thylacines at Hobart Zoo, they are encouraged to understand it not as an individual but as an endling: an animal that simultaneously embodies "the irreparable loss not only of the living but of the [...] capacity of evolutionary processes to regenerate life" (Rose, 2012, p. 128; see also Jørgensen, 2017, p. 134; *The Endling exhibition*).

Our article juxtaposes this reliance on all-too-familiar footage of 'the last' and the effect it has of silencing histories of colonization and anthropogenic biodiversity loss with what we can learn about the singular life and afterlife of Berlin's first Beutelwolf. By using the definite article in the paper's title, we want to insist on the singularity of this animal, which Berliners, as well as a wider German-speaking public, came to know first in the zoo, then in zoological publications, and later in the museum. And we seek to trace the visual and cultural regimes that shaped what was seen in real life and through a range of different media from 1864 to the present day. We will call this individual animal Beutelwolf, while using the term thylacine to refer to the species as a whole. In the course of the telling of this story, however, the function of the definite article will repeatedly shift from that of a marker of singularity to that of something else: in accounts of its zoo life, as a museum exhibit, and in the printed depiction of its mounted skeleton, Berlin's first Beutelwolf became THE Beutelwolf – that is, representative of the entire thylacine species. Through its mounted display and its portrayal in the well-known zoological reference book Brehm's

Thierleben, it achieved a unique but supra-individual status in the public imagination, close to that of a type specimen, or indeed the 'endling' in the video in the present exhibition, representing not an individual animal but the thylacine species as a whole.

Turned into a type, the animal has since performed symbolic work for the dissemination of the grand narratives of natural history to a wider German-speaking public. While in the current exhibition it serves to illustrate the devastating effects of habitat destruction, historically it has been used to support speculation about the workings of evolution and to prove the supposed superiority of placental mammals over marsupials. Throughout this article, we will insist on the singularity of Berlin's first Beutelwolf in order to interrogate those grand narratives. There are certainly limits to this approach – not least the projection of a modern Eurocentric notion of (human) individuality onto the being of another species and from another place. For now, however, we will follow it in the hope that it will allow us to attend to the ongoing "coloniality of knowledge" (Quijano 1997) that has structured and continues to structure the various lives of Berlin's first Beutelwolf, and which works to prohibit the recognition of other ways of relating to the animal and its extinction.

"Such an animal [...] belongs in a museum": Zoo life

The bare facts: Berlin's first Beutelwolf arrived at the city's zoo on 5 July 1864. His arrival was reported by several newspapers, including the *Berlinische Nachrichten* and the Leipzig-based *Illustrierte Zeitung* (also: *Erheiterungen; Morgenblatt*). Captured in colonised lutrawita (Tasmania), he had been shipped to London in 1856, where he lived eight years in captivity at the London Zoo, only to be transported to another imperial city, Berlin. Here he would die some three months later, becoming the longest-lived captive thylacine.

When he arrived in Berlin, this Beutelwolf was only the third of its kind to be shown in a zoo, and the first in mainland Europe. Only fourteen years earlier, arriving in 1850, the first thylacine exhibit had been a three-year wonder at London Zoo. As William Allen Drew remarked at the time: "Amongst the first, I noticed Lions and Lionesses, Jaguars, Pumas, Chans and the Tasmanian Wolf or Dog-headed Opossum, of which no other living example has ever been seen in civilized life" (Drew, 1852, p. 312). The Berlin Zoo was in desperate need of such remarkable animals to

attract the crowds. According to Wilhem Peters, the zoo's director, despite its "favourable conditions" and state support, the zoo "lagged behind all other [zoos] in its achievements, in the condition of its animals and in its scientific results" (cited in Bruce, 2017, p. 42).

So, what did visitors see when they visited the zoo's latest attraction? Some may have tried to recognise in the Beutelwolf the real-life animal they knew from an old children's book *Bilderbuch für Kinder*, a lavishly illustrated natural history series. An illustration of the "Hundsköpfige Beutelthiere [dog-headed pouch animal]" appears in volume 10 of the 1821 edition, where it shares the page with other "Strange Marsupials" in the ever-expanding "Miscellaneous" section of the publication project (Fig. 3). Their depiction is preceded by an entry on "The Interior of the Great Temple of Ybsambul" and followed by a discussion of "Strange Amphibians". Lacking any serious attempt at categorisation, the *Bilderbuch*'s publisher J. F. Bertuch defended the series' "most lively and colourful mixture of objects" by pointing out that he "only wanted to amuse" (Bertuch, 1790, p. 7). The brief description accompanying the picture, however, attempted to impart "Beutelthier" knowledge and invited readers to consider the animal's similarity with dogs "especially its head" while stressing that its "internal structure" was consistent with marsupials. It also commented on the animal's "particularly wild, vicious appearance", albeit acknowledging that "on the whole, little is known [about the animal], as only two specimens have



Fig. 3. "Das hundsköpfige Beutelthier [dog-headed pouch animal]" in Bertuch's *Bilderbuch für Kinder* (1821). The illustration is an adaptation of the image published in Harris 1808.

been caught, and both males" (Bertuch, 1821, p. 21; for context see Freeman, 2014).

The grouping of the thylacine with "wild, vicious" animals and the comparative gaze that this description invites, appear to have been modes of looking with which visitors some 40 years later also approached the zoo's "Käfig für reißende Thiere [Cage for ferocious animals]", a construction of five adjoining wooden enclosures with iron bars measuring approximately 3x3x2 metres. Here, Berlin's Beutelwolf was placed next to a leopard, a jaguar, a striped hyena and a placental wolf. The zoo's guidebook for 1864 foregrounded the animal's novelty ("It has not yet been brought to Europe alive") and invited viewers to compare him with his European namesake and visual relatives, stressing the similarity of physiology and behaviour to wolves and dogs: "The stature and size are like those of a young wolf or hunting dog, the head also resembles that of a dog, only the mouth is more widely divided" (Zoologischer Garten Berlin, 1864, p. 43). In fact, the dog-like appearance of the animal's head, in particular, seems to have been something everyone could agree on. Remarked upon by Bertuch and in the zoo guide, it was also emphasised in a drawing by animal illustrator Heinrich Leutemann, who portrayed the Beutelwolf's head from life during a visit to the zoo, as part of a one-page tableau of "animal types" for an 1867 issue of the *Illustrierte Zeitung* (Fig. 4).

But 1864 was not 1821, and instead of happily placing the Beutelwolf in a "most lively and colourful mixture of objects", people were now trying to sort out its position within rapidly changing ideas of taxonomy. The zoo's placement of the Beutelwolf with "ferocious animals" was reflective of such sorting, as was the guidebook's related assertion that "its way of life differs little from that of its relatives, the predators" (Zoologischer Garten Berlin, 1864, p.43). It is difficult for us today to grasp exactly how viewers would have understood this claim of the animal's affinity with "the predators". Was the zoo guide suggesting a direct biological link? Or was it hinting at ideas of convergent evolution?

If so, then for Alfred Brehm, eminent zoologist and founding director of the Hamburg Zoo, this affinity was no more than "implied", masking an underlying fundamental difference in evolutionary status (Brehm, 1867, p. 423). In an essay accompanying Leutemann's drawing, he reasoned that marsupials were nothing but Creation's imperfect first, primitive, "attempt" at producing

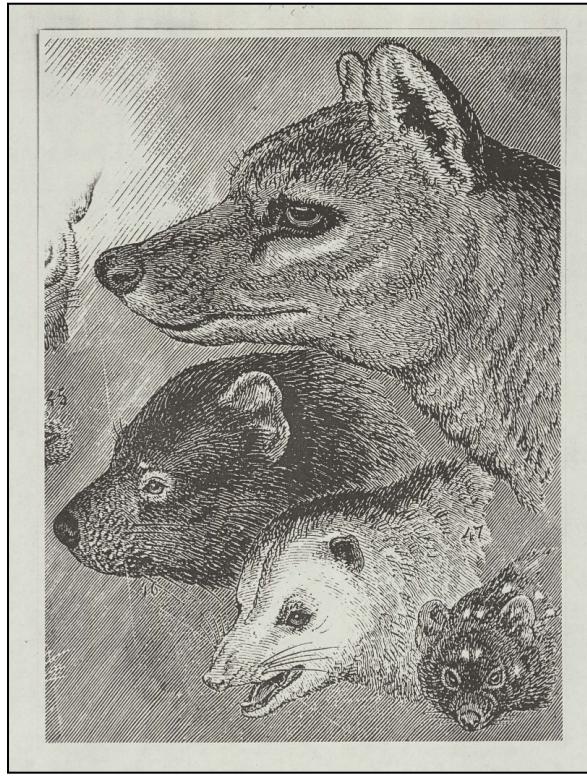


Fig. 4. Head of Berlin's first Beutelwolf (top), drawn from life by Heinrich Leutemann for the *Illustrirte Zeitung*, 7 December 1867, p. 389.

animals. Compared to placental mammals, he argued,

the marsupial always appears as an unfinished, imperfect creature, which is far surpassed by the animals as whose predecessors we regard them. And this, as has been remarked, by no means refers to the outer form alone, but also to the way of life, to the spiritual being. Among the marsupials there is not a single one which in cleverness equals other superior mammals, and several of them might be regarded as paragons of stupidity (Brehm, 1867, p. 423).

Brehm's comments form part of what Ashby (2021, 2023a) has identified as a dominant way of thinking about Australian animals. Already in 1834, Richard Owen, for example, first superintendent of the British Museum (Natural History) in London, had described marsupials as "characterized by a low degree of intelligence" (cited in Ashby, 2023a, p. 14). For a German audience, Brehm built on these insights in his 1867 essay, and more extensively in the second edition of his monumental *Illustrirte Thierleben* (1877). Here, in a veritable diatribe against the subclass of marsupials as a whole, he described them as "a group whose heyday is to be

sought in the days of the clumsy amphibians of the land, the flying lizards of the air, the sea dragons of the oceans [...] [as] descendants of past stages of creation, as the earliest mammals, forerunners of more highly developed forms, the attempt of creative nature to form a mammal for the first time" (p. 539). Brehm's verdict culminated in the insight that "the marsupial is in every way inferior in form, development and perfection to the carnivorous or rodent animals" that it resembles (p. 541).

Although never well-known in Britain or North America, Brehm's *Illustrirte Thierleben* was the most important zoological encyclopaedia ever published in German. Translated into French, Russian, Hungarian and Swedish, Brehm's writing "had an enormous impact on how Europeans of his generation [...] observed the animal kingdom" (Reichenbach 2010, p. 186). His descriptions of marsupials such as the thylacine therefore carried weight and promoted a particular view of the animal. Like other nineteenth-century authors, Brehm introduced a temporal dimension to the classical notion of a *scala naturae*. In line with this older view, he regarded marsupials as physically and intellectually inferior, as if they occupied different rungs of the 'ladder of life' (Baum, 2008). At the same time, however, he saw marsupials as remnants of an earlier stage of evolution, as anachronistic precursors of their superior 'modern' successors, the placental mammals. Disregarding the severe pressures on the species from habitat loss and settler violence, he blamed deficiencies in thylacine biology for the species' decline, which he ultimately saw as incompatible with modernity (see Ashby, 2023b, p. 250; Ashby 2023a, p. 288–289). It is this view of marsupials that we identified earlier as still haunting the language of the MfN's current thylacine exhibit.

And yet: While Brehm's writing is primarily concerned with the supposed inferiority of the thylacine species, it also allows us glimpses into the lives and deaths of individual Beutelwolves in Berlin. In the first edition of *Thierleben*, we find the intriguing comment that thylacines are "difficult to keep alive" (Brehm 1864, p. 6), which could have been written with the Berlin animal in mind. The 1877 edition then devoted an entire paragraph to thylacine life in captivity, evidently based on observations of live animals. By this time, the Berlin Zoo had also housed the city's second Beutelwolf from 1871 to 1873 (Campbell, 2024), so we must assume that Brehm's comments were written with both animals in mind. Echoing his

earlier disparaging remarks, Brehm describes the species as “stupid and mindless”:

Newly captured Beutelwölfe are said to behave very defiantly and unruly in the beginning, climbing around in their cage or in the roof of a house with cat agility and performing movements of 2-3m height. In long captivity, the wild nature in the presence of a human being subsides; [...] they run around in their cage for hours without paying much attention to the outside world, or lie resting and sleeping just as apathetically in one and the same place. Their clear, dark brown eyes stare blankly at the observer and completely lack the expression of a real predator’s eye (1877, p. 547).

What is new in Brehm’s 1877 description is the expressed lack of interest on both sides of the iron bars. Berlin’s Beutelwolf 1 and 2 were not interested in Berliners (or, as Brehm seems to speculate, lacked the mental capacity for curiosity), while they could only arouse fleeting interest in zoo visitors as well. Or were the Beutelwolfs simply hard to watch for those who recognised in the animals’ trancelike pacing, apathy and blank stares the telltale signs of stressed animals in captivity?

We get a better idea of what zoo visitors might have seen from illustrator Leutemann, who a few years earlier had laconically commented on this mutual lack of recognition in a satirical essay on the deplorable state of the Berlin Zoo:

The Berlin institution, in its conscious self-sufficiency, had hardly bothered with acquiring new, unprecedented animals, and so, year after year, a certain number of, as it were, immortal animals formed a venerable foundation, the members of which seemed to wrathfully ask any newcomer, who had come here almost in error, how he could dare to disturb the tranquillity of their contemplation. Such arrivals usually soon lost their desire to stay alive. Once when a really rare animal, a Beutelwolf, was in the garden, I heard the words from influential people: Such an animal is not for the public, it must be dead and belongs in a museum. And behold, the Beutelwolf was so attentive that he soon followed this recommendation: it took hardly any time at all before he was dead (Leutemann, 1871, p. 37).

According to Leutemann’s verdict, the mere fact of being an “unprecedented animal” seems to have provoked other animals’ desire to see the

Beutelwolf gone. But why would “influential people” have been prompted to wish for its demise?

Of Bones, Teeth and Pouch: Skeleton Afterlife

Death, however, is far from the end of the first Beutelwolf’s story. Zoo director Wilhelm Peters has been identified as the person behind Leutemann’s “influential people” cipher (Möller, 1997, p. 145). He ensured that the animal would become valuable source material for natural history in general and the status of Peters and the Zoo in particular. After its demise on 14 November 1864, the Beutelwolf’s body was quickly transported to Humboldt University’s Zoological Museum, whose entry catalogue records the animal’s arrival on the same day (MfN Cat, ZMB-Mam-2986). Here he was dissected and divided into two separate Beutelwolfs, one as a mounted skeleton, henceforth part of the University’s Anatomical-Zoological Museum, and the other as a taxidermy mount. There is also a record of a brain preserved in alcohol, which was later transferred to the Zoological Museum of Kiel University in the 1960s, but which is no longer identifiable in the Kiel collection. The inclusion of a drawing of his skeleton (Fig. 5) in Brehm’s popular *Thierleben* from 1877 with the caption “Skeleton of the Beutelwolf (from the Berlin anatomical museum)” suggests that at least the skeleton was used for research and teaching purposes at the time (Brehm 1877, p. 545).

Any attempt to see Berlin’s first Beutelwolf today, therefore makes it necessary to visit the exhibition as well as the MfN’s research collection. It is, effectively, an act of piecing together those violently separated parts of the animal’s body to see a poignant whole. But in 1864 it was the skinning of fur, the bottling of organs and the scraping of bone that gave value to an animal that had come to be considered disappointing in life. By the time Peters consigned the Beutelwolf to the MfN, the ‘currency’ of the dead thylacine had already risen through scientific attention. London’s first thylacine after its death in 1853, had quickly become the subject of Edward Crisp’s paper “On some points relating to the Anatomy of the Tasmanian Wolf” (Crisp, 1855). And Peters himself is described by Gary Bruce in his history of the Zoo as “interested in a ‘thick description’ of the animal and its place in the pantheon of species,” which is only possible by studying it from the inside out, “rather than in animal behavior or preservation” (Bruce, 2017, p. 41).

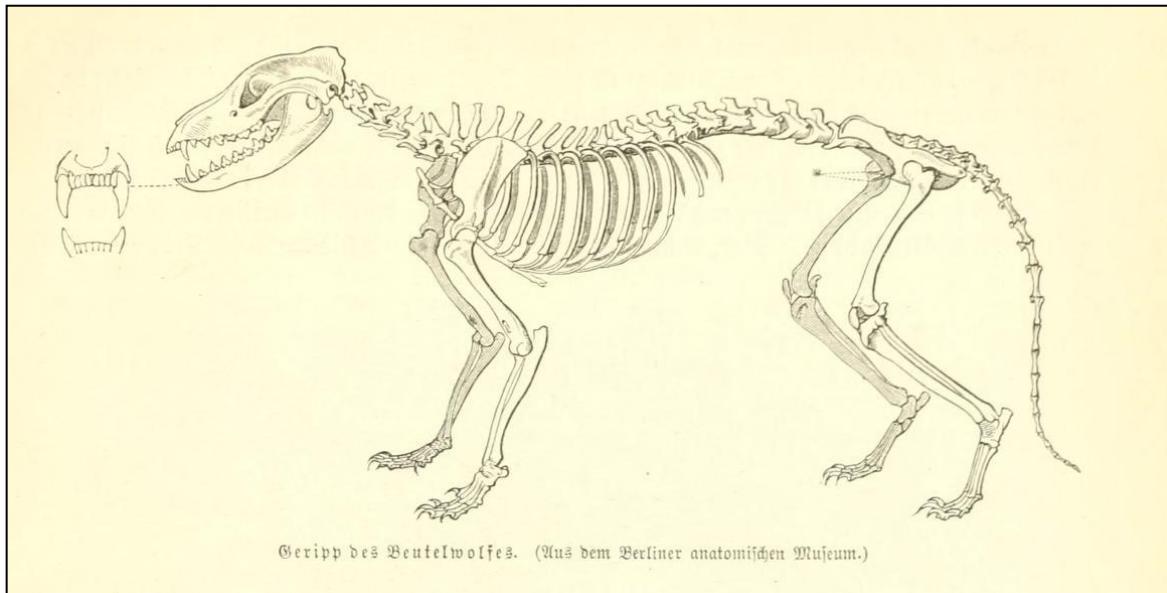


Fig. 5. "Geripp des Beutelwolfs (aus dem Berliner anatomischen Museum) [Skeleton of the Beutelwolf (from the Berlin anatomical museum)]" in A.E. Brehm (1877), Brehms Thierleben, p. 545.

In adopting this approach, Peters and Brehm were learning from Georges Cuvier, one of the founders of comparative anatomy, who had argued that the study of skeletons – through vivisection and drawing – would reveal the particular anatomical organisation unique to a species and provide the basis for comparing it with others. In his own skeletal study of the thylacine, Cuvier had found that it shared features with much smaller, omnivorous marsupials (Cuvier, 1863, p. 205). The inclusion of the skeleton in Brehm's *Thierleben* must be seen in the light of this development. Its particular focus on certain dental details and the dotted lines indicating epipubic bones, thought at the time to support the pouch, became key to understanding the nature of the animal. Still labelled as an illustration of a specific animal "from the Berlin Anatomical Museum", the drawing in fact functioned as a tool for seeing the thylacine species as a whole.

In this act of seeing, the pouch was crucial in explaining the special ability of marsupials to care for their altricial young and the teeth were key to understanding the thylacine as a marsupial rather than a placental mammal. Thylacine teeth had already been described by Tomes in 1849 (p. 409) and again by Flower in 1868 (p. 636), and it seems reasonable to assume that Brehm's illustrator would have appreciated their scientific importance. Emphasised by a zoomed-in, front-on view, the drawing clearly shows eight upper incisors as a point of differentiation from both the wolf and the dog, which have only six. At the same time, Brehm, in his comments was keen to

describe thylacine teeth as 'primitive': "incomplete and backward [...] always more imperfectly arranged [than in corresponding placental mammals], either more irregularly set or blunter, even less beautiful in colouring, less white and pure than those of the more perfect predator of later times" (Brehm, 1877, p. 541).

And yet, on the whole, their teeth – much like their bodies when seen whole and moving about in a zoo – were strangely and even confusingly 'almost' dog-like to human observers. Four years before Brehm's anatomical sketch F.H. Balkwill had written about this "Difficulty for Darwinists":

Mr. Darwin lays it down that the controlling forces which direct the path of variation in a species are the other species with which it has to struggle; and if these forces were sufficiently definite and restricted in their action to produce two such similar dental types as those of the thylacine and dog, independently of each other, it strikes me that classification of mammals would no longer be possible; should we not have dogs, cats, rodents and ruminants arising from independent sources all over the world? (Balkwill, 1873, p. 3698).

Seeing the material reality, even of the skeleton, was not enough, Balkwill argued. Observation alone would only lead to the position that this marsupial, this already decidedly more primitive organism could be seen as dog-like. The solution was not simply 'inside' – the truth of skeleton and

teeth – but classification. As Balkwill went on to quote:

Darwin himself says [...] 'I believe that something more is included; and that propinquity of descent, the only known cause of the similarity of organic beings, is the bond, hidden as it is by various degrees of modification, which is partially revealed to us by our classifications' (Darwin cited in Balkwill, 1873, p. 3698).

It was therefore only in death, and through the mental operation of classification that it facilitated, that the link of Berlin's first Beutelwolf to its permanent, 'real' taxonomic family could be firmly established. In its emphasis on an abstracted pouch and teeth, and their spectral removal from the whole skeleton, Brehm's diagram teaches us that these are the two key things to 'really' see about the thylacine, and that to see them is to understand the animal both inside and out, and in both cases dead. It was only in death that the teeth and bones could be examined in detail and recorded in drawing. Only in death was the animal still enough to be properly 'seen'. And only through that classification could one tell what was a dog or a vicious predator. Or what was a fearsome wolf and what was an apathetic marsupial.

On Display: The Taxidermy Revenant

Although possibly familiar from the skeletal diagram in Brehm's *Illustriertes Thierleben*, it was not until 1889, when the university collections were amalgamated into the Museum für Naturkunde, that Berliners were invited to see the Beutelwolf in what Leutemann had foreseen as the animal's more appropriate museum setting. Or rather: some of it. A mount of the animal's skin – previously housed in the university's zoological museum and restricted to a scientific audience – was put on display and has been the object of museumgoers' gazes ever since. However, the meanings ascribed to the animal body underwent several shifts during this period, which can be traced by a cursory reading of the various museum guides published by the MfN between 1899 and the 1930s. These allow us to extend our analysis of how Berliner's saw the Beutelwolf beyond the zoo animal's death and its discussion in contemporary zoological literature to show how these representations continued to inform the presentation of the animal body right up to the current exhibition.

Museum guidebooks are a particularly pertinent example of the processes of visibilisation described by Bezan, Guaso and O'Key, as they prescribe a tour of the collection and offer instructions to museumgoers on how to see and make sense of the exhibits (Bezan 2019; Guasco, 2020; O'Key, 2021). A guide from 1932 states in this regard: "The guide is intended to be, in a sense, the detailed text to the demonstration material housed in the cabinets of the hall, and this material forms the illustration to the text" (Zimmer, 1932, p. 3). Printed in large numbers for visitors to purchase at low cost, they also served as souvenirs and mini-biology textbooks whose impact on popular perceptions of biology went far beyond their immediate use.

The first evidence of the mounted animal on display at the MfN comes from a guide published in 1899 by the museum's founding director Karl Möbius. By this time, the status of Berlin's zoological collections had changed dramatically (Schwarz, 2024). With the founding of the German nation-state in 1871, the museum had become a national project meant to reflect, not least, the country's newfound status as a colonial power since 1884. The Bundesrat resolutions of 1889 and 1891 had cemented this status by centralising the processing of ethnographic and natural history specimens collected by colonial troops and the scientists who travelled with them in Berlin's imperial institutions ("Colonial Contexts"). This shift also saw the introduction of evolutionary displays alongside the older taxonomic principles that had organised the University's Zoological Museum grouping – for example, the great apes together with human skeletons and skulls from all orders of mammals. In this display, a prominent place was given to marsupials. Their description focused on the altricial nature of their newborns and the physical characteristics of the animals that enabled mothers to feed their young: "Marsupials are born undeveloped," Möbius informed his readers, "in the pouch, a skin cavity on the abdomen, in which the milk warts lie, they receive the food for further development. In front of their pelvis there is one marsupial bone on each side." The Beutelwolf formed part of this display and was described as a predator with many pointed teeth in a list evidently intended to illustrate the diversity of the marsupial species (Möbius, 1899, pp. 16-17).

Eight years later, in 1907, the Beutelwolf was no longer explicitly mentioned in the revised museum guide, and the overall space devoted to marsupials in the publication was reduced to make room for

a greater number of animals, particularly from the German colonies on the African continent. This decline in interest was accompanied by a change in status, reminiscent of the *scala naturae* we have already discussed in relation to Brehm's writings on the life of the Beutelwolf in the Berlin Zoo. Published under the new directorship of Prof Dr August Brauer, marsupials were now described as the "lowest mammals" and featured in a potentially shocking display: "In the last rows of the cabinet are the lowest mammals, the marsupials and the monotremes. The former get their name from the fact that the young develop in a pouch that surrounds the teats. One specimen shows a pouch cut open and the young hanging from the teats inside" (Brauer, 1907, p. 17).

When Brauer published a new guide only three years later (1910), the tone of the publication had shifted significantly towards a glorification of the German colonial enterprise. The mammal hall, in particular, appears to have been radically altered, with taxonomic principles disregarded in favour of colonial heroes with whom the animals were associated. Among those singled out in the guide were a "rare okapi, which His Highness Duke Adolf Friedrich zu Mecklenburg brought back from his great inner-African expedition" and a chimpanzee, who "lived for several years at the biological station in Amani in German East Africa and was given to the museum by Privy Councillor Prof. Dr. Stuhlmann" (Brauer, 1910, pp.14-18). In this context, it is striking that the text for the marsupials underwent little change apart from being shortened once again: animals not associated with German colonial heroes were apparently not considered to be of equal educational value to museum visitors.

The 1918 and 1921 editions retain this tone, still referring to "our colony of German East Africa" even in 1921, years after Germany had lost its colonies to the Versailles Allies (Kükenthal, 1921, p. 19). By 1931, however, these colonial references have disappeared. Here marsupials and monotremes were once again described as "especially remarkable". What made them remarkable now was their juxtaposition as "primitive forms", displayed on one side of the room, with the placental mammals on the other side: "On the left, the primitive forms: the Australian monotremes – the only egg-laying mammals – furthermore marsupials [...]"; on the right, on the other hand, the highest mammals, the human-like apes, including a huge gorilla with a skeleton" (Museum für Naturkunde, 1931, p. 5).

Taken together, these guides suggest that the taxidermy mount of Berlin's first Beutelwolf has been on display continuously ever since it moved to the Museum für Naturkunde in 1889. While he would never generate the excitement of animals associated with German colonial heroes, he was consistently shown with other marsupials, a group initially singled out for their curious peculiarities and later denigrated as "lowest" and "primitive" mammals. This subordinate placement of the thylacine on an imaginary evolutionary ladder in 1931 echoes Brehm's earlier description of the animal as "in every way inferior" to placental mammals; a status indicated, among other things, by its "imperfect" teeth. It reminds us to ask how the concepts, 'primitive' and 'extinct' have been used to enable each other long before the Beutelwolf was singled out from the group of marsupials to become the charismatic endling that we are invited to see today. The repercussions of that long-held view of "primitive" continues to reverberate in the current "Extinction through Human Activity" cabinet.

Seeing is believing

Throughout this article we have had an awkward relationship with individuality. On the one hand, our focus on the life, death and afterlife of an individual animal has allowed us to trace how Berlin's first Beutelwolf was subjected to a succession of generalising ways of seeing and understanding, first in the Berlin Zoo, then in zoological publications, and later in the museum. These rendered it emblematic of larger discourses about the workings of evolution, the place of marsupials within it, and the effects of habitat destruction. By focusing on this singular animal, we were also able to address some of the links between settler colonialism, natural history and species extinction; links that have largely remained outside the scope of the MfN's demonstrated commitment to biodiversity advocacy today.

At the same time, however, we remain wary of an individualising strategy that ascribes to non-human animals the attributes of historical actors. This not least, because it further removes the coorinna of lutrawita (Tasmania) from what his relations were and might still be to Country and Indigenous life (Araluen, 2022); relations, human and non-human, that potentially also encompass thylacines who lived across mainland Australia and appear in Pilbara and Kakadu rock art, song and ceremony (Vasseleu, 2022). We do not suggest that the MfN can resolve this tension by simply incorporating Indigenous ways of knowing the thylacine into the exhibition space (Schlunke, 2024). And certainly

not without a proper reckoning with the implications of how our contemporary ways of knowing and representing extinction follow a long tradition of seeing certain animals, such as the thylacine, as ‘primitive’. After all, the mutually legitimising notions of ‘primitive’ and ‘destined for extinction’ were also used to justify the attempted genocide of the Indigenous palawa people of lutrawita with bounties placed on both the palawa and the coorinna (Ashby, 2023b). In this context, the MfN exhibition’s silence on Amalie Dietrich’s looting of human remains in colonial Queensland, just a few metres from the thylacine exhibit, is telling. Rather than treating Dietrich’s actions as an isolated incident, irrelevant to the practices of nineteenth-century natural history, natural history museums need to acknowledge such violence as structurally embedded in their institutional and disciplinary history (Das and Lowe, 2018; Ashby and Machin, 2021). How might such pasts be adequately addressed while at the same time making the MfN and other colonial institutions appropriate keeping places for coorinna and culturally safe for Indigenous staff and visitors? And how much might a German museum audience, potentially well-educated in the effects of scientific racism when enacted in a human world, appreciate that this way of seeing had mutually reinforcing repercussions for all living beings?

Through our own reflections on Berlin’s first Beutelwolf, we have come to understand that such steps towards change would need to move away from the focus on death that is entrenched in the thinking and practice, past and present, around thylacines, that we have outlined in this paper. Whether museum taxidermy, nineteenth-century evolutionary thought, or present-day concerns about habitat loss, they all rely on what we have described as the animal’s double-death, individually and as a species, and they cut Berlin’s Beutelwolf off from his living relations with kin and Country. Australia’s First Peoples have consistently emphasised the importance of Country and their relations with animals, extant and extinct, and Australian natural history museums are beginning to reflect this in their exhibition spaces and museum pedagogy (“Starting where you are”; “Debunking”). To follow their lead would be to make connection the true organising principle of both biodiversity and extinction exhibits. Such museum spaces would acknowledge living relations, even with extinct species, and take responsibility for the multiple and often violent disruptions of those relations which colonial natural history thought and practice contributed.

Acknowledgements

Work on this paper was undertaken while the authors were receiving funding from the ARC (“Beyond Extinction: Reconstructing the Thylacine [Tasmanian Tiger] Archive”) and the German Lost Art Foundation (“Berlin’s Australian Archive”). The authors would like to thank Christiane Funk (MfN, Collection Management Recent Mammals), Ina Heumann and Katja Kaiser (MfN, Centre for the Humanities of Nature), as well as Fiona Möhrle, Lindsay Parkhowell, Annabell Fender, Laura Boehm and Marla Helling (University of Potsdam) for important research assistance.

References

Araluen, E. (2022). ‘Muyum: this all come back now.’ In *This All Come Back Now: An anthology of First Nations speculative fiction*, edited by Mykaela Saunders, 2022, 22–29. Brisbane, University of Queensland Press.

Ashby, J. (2021) ‘The political platypus and colonial koala: decolonising the way we talk about Australian animals’, *Journal of Natural Science Collections*, 9, pp. 35–45. <http://www.natsca.org/article/2684>

Ashby, J. (2023a) *Platypus matters: the extraordinary story of Australian marsupials*. London: William Collins.

Ashby, J. (2023b) ‘How collections and reputation were built out of Tasmanian violence: thylacines (*Thylacinus cynocephalus*) and Aboriginal remains from Morton Allport (1830–1878)’, *Archives of Natural History*, 50(2), pp. 244–264. doi: <https://doi.org/10.3366/anh.2023.0859>

Ashby, J. and Machin, R. (2021) ‘Legacies of colonial violence in natural history collections’, *Journal of Natural Science Collections*, 8, pp. 44–54. <http://www.natsca.org/article/2631>

Balkwill, F.H. (1873) ‘A difficulty for darwinists’, *The Zoologist: A Monthly Journal of Natural History*, 8, pp. 3581–3591.

Baum, D. (2008) ‘Trait evolution on a phylogenetic tree: relatedness, similarity, and the myth of evolutionary advancement’, *Nature Education*, 1(1), p. 191.

Berlinische Nachrichten (1864) 5 July 1864.

Bertuch, F.J. (1790) *Bilderbuch für Kinder enthaltend eine angenehme Sammlung von Thieren, Pflanzen, Blumen, Früchten, Mineralien, Trachten und allerhand andern unterrichtenden Gegenständen aus dem Reiche der Natur, der Künste und Wissenschaften; alle nach den besten Originalen gewählt, gestochen, und mit einer kurzen wissenschaftlichen, und den Verstandes-Kräften eines Kindes angemessenen Erklärung begleitet*.

Vol. 1. Weimar: Verlag des Industrie-Comptoirs.

Bertuch, F.J. (1821) *Bilderbuch für Kinder enthaltend eine angenehme Sammlung von Thieren, Pflanzen, Blumen, Früchten, Mineralien, Trachten und allerhand andern unterrichtenden Gegenständen aus dem Reiche der Natur, der Künste und Wissenschaften; alle nach den besten Originalen gewählt, gestochen, und mit einer kurzen wissenschaftlichen, und den Verstandes-Kräften eines Kindes angemessenen Erklärung begleitet.* Vol. 10. Weimar: Verlag des Industrie-Comptoirs.

Bezan, S. (2019) 'The Endling Taxidermy of Lonesome George: Iconographies of Extinction at the End of the Line', *Configurations*, 27(2), pp. 211–238. <https://dx.doi.org/10.1353/con.2019.0013>

Boyle, C. (2019) 'The silence of the huia: Bird extinction and the archive', *Journal of New Zealand & Pacific Studies*, 7(2), pp. 219–236.

Brauer, A. (1907) *Führer durch die zoologische Schausammlung des Museums für Naturkunde in Berlin*. Burg b. M.: Hopfer.

Brauer, A. (1910) *Führer durch die zoologische Schausammlung des Museums für Naturkunde in Berlin*. Burg b. M.: Hopfer.

Brehm, A. E. (1864). *Illustriertes Thierleben: eine allgemeine Kunde des Thierreichs*. Leipzig: Bibliographisches Institut.

Brehm, A.E. (1867) 'Thiertypen', *Illustrierte Zeitung*, 7 December, pp. 387-390.

Brehm, A.E. (1877) *Brehms Thierleben: Allgemeine Kunde des Thierreichs*. 2nd edn. Vol. 2, Erste Abteilung: Säugethiere. Leipzig: Verlag des Bibliographischen Instituts.

Bruce, G. (2017) *Through the lion gate: a history of the Berlin zoo*. New York: Oxford University Press.

Campbell, C.R. (2024) *The Thylacine museum: the Thylacine in captivity*. Available at: http://www.naturalworlds.org/thylacine/captivity/zoo/internationally/internationally_4.htm (Accessed: 20 July 2024).

"Colonial Contexts" (n.d.) "Colonial Contexts: The Museum für Naturkunde Berlin critically reflects its historical responsibility." *Museum für Naturkunde Berlin*, <https://www.museumfuernaturkunde.berlin/en/about/the-museum/colonial-contexts> (Accessed 20th July 2024).

Crisp, E. (1855) 'On some points relating to the anatomy of the Tasmanian Wolf (*Thylacinus cynocephalus*) and of the Cape hunting- dog (*Lycaon pictus*)', *Proceedings of the Zoological Society of London*, 23, pp. 188–191.

Cuvier, G. et al. (1863) *Discours sur les révolutions du globe: avec des notes et un appendice d'après les travaux récents de MM. de Humboldt, Flourens, Lyell, Lindley, etc. rédigés par le Dr Hoefer*. Paris: Didot.

Damaschun, F., Faber, A. and Steiner, G. (eds.) (2019) *Museum fur Naturkunde: The Exhibitions*. Berlin: Museum fur Naturkunde.

Das, S. and Lowe, M. (2018) 'Nature Read in Black and White: decolonial approaches to interpreting natural history collections', *Journal of Natural Science Collections*, 6, pp. 4–14. <http://www.natsca.org/article/2509>

"Debunking" (2020) "Debunking the myth that Aboriginal stories are just myths: the Yamuti and the megafauna Diprotodon," <https://australian.museum/learn/first-nations/yamuti/> (Accessed 20th September 2024).

Drew, W. A. (1852) *Glimpses and gatherings, during a voyage and visit to London and the Great Exhibition in the summer of 1851*. London: Homan & Manley and Abel Tompkins.

Erheiterungen (1864) 6 July 1864.

Flower, W.H. (1867) 'On the development and succession of the teeth in the marsupialia', *Proceedings of the Royal Society of London*, 15, pp. 463–468. doi: <https://doi.org/10.1098/rspl.1866.0107>

Freeman, C. (2014) *Paper tiger: how pictures shaped the Thylacine*. Hobart: Forty South Publishing.

Guasco, A. (2021) "As dead as a dodo": Extinction narratives and multispecies justice in the museum', *EPE: Nature and Space*, 4(3), pp. 1055–1076. doi: <https://doi.org/10.1177/2514848620945310>

Harris, G. P. R. (1808) 'Description of Two New Species of *Didelphis* from Van Diemen's Land', *Transactions of the Linnean Society of London*, 9, pp. 174–178. doi: <https://doi.org/10.1111/j.1096-3642.1818.tb00336.x>.

Illustrierte Zeitung (1864) 7 December 1864.

Jørgensen, D. (2017) 'Endling, the Power of the Last in an Extinction-Prone World', *Environmental Philosophy*, 14(1), pp. 119–38. <https://www.jstor.org/stable/26894342>.

Kükenthal, W. (1921) *Führer durch die zoologische Schausammlung des Museums für Naturkunde in Berlin*. Burg b. M.: Hopfer.

Leutemann, H. (1871) 'Der Schönste der Wüstenkönige', *Die Gartenlaube*, 37, pp. 613, 615–616.

Massol de Rebetz, C. (2020) 'Remembrance day for lost species: remembering and mourning extinction in the anthropocene', *Memory Studies*, 13(5), pp. 875–888. doi: <https://doi.org/10.1177/1750698020944605>

Maynard, D. and Gordon, T. (2014) *Tasmanian Tiger: Precious Little Remains*. Launceston: Queen Victoria Museum and Art Gallery.

MfN Catalog, (per 2024) Generalkatalog

Mammalia I. MfN, Entry No. 2986 <http://coll.mfn-berlin.de/u/66873e>.

Möbius, K (1899) *Führer durch die zoologische Schausammlung des Museums für Naturkunde in Berlin*. Burg b. M.: Hopfer.

Möller, H. F. (1997) *Der Beutelwolf: Thylacinus cynocephalus*. Hohenwarsleben: Westarp Wissenschaft.

Morgenblatt (1864) 28 July 1864.

Museum für Naturkunde (1931) *Führer durch das Museum für Naturkunde Berlin, Invalidenstraße 43, Kurzer Uebersichtsführer nebst Plan*, Berlin: Selbstverlag des Museums.

O'Key, D. (2021) 'Why look at taxidermy animals? Exhibiting, curating and mourning the Sixth Mass Extinction Event', *International Journal of Heritage Studies*, 27(6), pp. 635–653. doi: <https://doi.org/10.1080/13527258.2020.1844276>

Parzinger, H. (2011) *Das Humboldt-Forum: 'soviel Welt mit sich verbinden als möglich' - Aufgabe und Bedeutung des wichtigsten Kulturprojekts in Deutschland zu Beginn des 21. Jahrhunderts*. Berlin: Stiftung Berliner Schloss - Humboldtforum.

Pike, S. M. (2017) *For the wild: ritual and commitment in radical eco-activism*. Los Angeles: University of California Press. doi: <https://doi.org/10.1515/9780520967892>

Pollock, G., and Zemans, J. (2007) *Museums after Modernism: Strategies of Engagement*. Oxford: Blackwell.

Quijano, A. (1997) 'Colonialidad del poder, cultura y conocimiento in America Latina', *Anuario Mariateguiano*, 9, pp. 113–121.

Reichenbach, H. (2019), 'Meisen, L. Die Charakterisierung der Tiere in Buffons Histoire naturelle', *Archives of Natural History*, 37(1), pp. 185–187. doi: <https://doi.org/10.3366/E0260954109001880>

Rose, D. B. (2012) 'Multispecies knots of ethical time', *Environmental Philosophy*, 9(1), pp. 127–140. doi: <https://doi.org/10.5840/envirophil2012918>

Schlunke, K. (2024) 'The practices of care: extinction and de-colonization in the natural history museum', *Continuum: Journal of Media & Cultural Studies*. doi: <https://doi.org/10.1080/10304312.2024.2384951>

Schwarz, A. (2024) "Pioneers of Culture": Australian natural history and the German colonial imaginary', *Continuum: Journal of Media & Cultural Studies*. doi: <https://doi.org/10.1080/10304312.2024.2394957>

"Starting where you are" (2024) "Starting where you are: First Nations non-linear storytelling," <https://australian.museum/learn/first-nations/burra/non-linear-stories/> (Accessed 20th September 2024).

"Strengthening Engagement" (2020) "Museum für Naturkunde Berlin strengthens its engagement for biological diversity," <https://www.museumfuernaturkunde.berlin/en/press/press-releases/museum-fur-naturkunde-berlin-strengthens-its-engagement-biological-diversity> (Accessed 20th September 2024).

te Heesen, A. (2017) 'The unending quantity of objects: an observation on museums and their presentation modes', in Schaffer, S., Tresch, J. and Gagliardi, P. (eds.) *Aesthetics of universal knowledge*. London: Palgrave Macmillan, pp. 115–134. doi: <https://doi.org/10.1007/978-3-319-42595-5>

The Endling exhibition (2001) [Exhibition]. National Museum of Australia, Canberra. [running time e.g. 10 October 2001–15 December 2001].

Toepfer, G. (2019) 'Naturgeschichtlicher Naturalismus und naturwissenschaftlicher Antinaturalismus in neuzeitlichen Biodiversitätsbildern', in Felfe, R. and Saß, M. (eds.) *Naturalismen: Kunst, Wissenschaft und Ästhetik*. Berlin, Boston: De Gruyter, pp. 151–170. doi: <https://doi.org/10.1515/9783110592436-012>

Tomes, J. (1849) 'On the structure of the dental tissues of marsupial animals, and more especially of the enamel', *Philosophical Transactions of the Royal Society*, 139, pp. 403–412. doi: <http://doi.org/10.1098/rstl.1849.0021>

Turnbull, P. (2019) 'Amalie Dietrich and collecting the Indigenous dead in colonial Queensland', *Australian Studies Journal Zeitschrift für Australienstudien*, 33/34, pp. 1–14. doi: <https://doi.org/10.35515/zfa/asj.3334/201920.15>

Vasseleu, C. (2022). *Tiger on the Rocks* [film]. Australia: Bower Bird Films.

Vogel, J. (2016) 'Mit Biodiversität leben: Die Rolle der Naturkundemuseen', in Blum, A. et al. (eds.) *Diversität: Geschichte und Aktualität eines Konzepts*. Würzburg: Königshausen und Neumann, pp. 237–244.

Westergaard, G. (2023). 'Colonial entanglement in extinction narratives: The afterlives of two Saint Lucia giant rice rats', *Journal of Natural Science Collections*, 11, pp. 3–12. <http://www.natsca.org/article/2795>

Zimmer, C. (1932) 'Führer durch den Biologischen Saal', in *Führer durch das Museum für Naturkunde*. Berlin: Selbstverlag des Museums.

Zoologischer Garten Berlin (1864) *Der Führer im Zoologischen Garten zu Berlin*. Berlin: Menl & Co.