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Ovambo human remains in the Natural History Museum Vienna: Viktor Lebzelter's anthropological collection from Namibia

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(with 6 figures and 1 table)

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Abstract

In recent years, the repatriation of human remains to Namibia has increased. Most of these repatriations have been linked to the genocide, recently acknowledged by the Federal Republic of Germany, that occurred during the time of colonial occupation. In the aftermath of the genocide, many European countries, including Austria, were also involved in collecting human remains from then Southwest Africa.

This report examines the history and archival documentation of a collection of cranial remains of at least 27 individuals from Ovamboland curated in the Natural History Museum in Vienna. The collection was acquired by Viktor Lebzelter during his research in Southern Africa between 1926 and 1928. Lebzelter documented that these human remains belonged to individuals who had died during a famine in 1916 in an attempt to flee to Hereroland. Their remains were later collected from the bush and transported to the Natural History Museum in Vienna. In order to ascertain if Lebzelter's narrative on the provenance aligns with the evidence derived from the skeletal remains, a bioarchaeological re-analysis was conducted. This re-analysis highlights the taphonomy and health indicators of the remains.

While the results of the re-analysis of the osteological examination support Lebzelter's claim of the post-mortem environment, it can neither be confirmed nor denied that these individuals were associated with the hunger crisis of 1915/1916. Further, it is not clear if Lebzelter collected the remains himself or received them from the South African colonial government. Whether or not he was aware of the wider picture of the gruesome colonial impact which exacerbated the famine, his actions were clearly aimed to profit from the human remains and use them for his research on racialization and classifying human populations.

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Key words: bioarchaeology, taphonomy, provenance research, Namibia, expedition, context of injustice, colonial context, famine.

Introduction

The 1978 booklet guiding through the Natural History Museum's anthropological exhibition mentions a certain "Capitän KOHN" [sic] who donated 27 skulls[4] from "Western Ovamboland" to the collection of the museum (Szilvássy 1978: p. 38). Furthermore, it quotes from a remark in the museum's acquisition book written by the director Viktor Lebzelter and the curator Gabriele Gruber-Thalmann, both from the museum's Department of Anthropology around 1930: *"All these skulls belong to individuals who in 1916, the year of hunger, wanted to flee in big numbers to Hereroland, with their remaining cattle, but died along the way. Their remains were later found in the bush in their hundreds or thousands"*. It became apparent that the name of the donor given by Szilvássy (1978) was actually wrong – the correct spelling reads in fact "Capitan Hahn" and not "Kohn" (see Fig. 1).[5] This makes it possible to place the fate of the 27 individuals concerned, and the acquisition of their human remains, into the context of Namibian (post-) World War I history. At the same time, Lebzelter's Ovambo collection stands in the broader context of human remains appropriated during colonialism, and of their potential repatriation – a topic of particular relevance to Namibia.

Since the seminal Sarr-Savoy report on the Restitution of African Cultural Heritage, at the latest, the international debate on looted, stolen or under coercion purloined ethnographica and art, housed and exhibited mainly in European and US museums and universities, has considerably intensified. Restitutions of artefacts to their countries or communities of origin have already taken place or are being considered (Sarr & Savoy 2018; cf. Savoy 2021; with regard to Austria: Schölnberger 2021). Human remains that make up collections in many ethnographic museums, natural history museums, or medical institutions worldwide, retain an even more intricate history. That, however, has fortunately engendered an increasingly straightforward sense of responsibility not only among collection curators, but also amongst the general public. The history of collecting human remains under colonialism is indeed intrinsically related to hierarchical, classificatory worldviews. Awareness of the terrible consequences of this Eurocentric approach in terms of racism, genocides and the shoah is increasing. Consciousness of the interrelation between prejudiced perceptions and acts of violence on all possible levels is unravelling itself within the scientific community, as well as among communities of origin (Stoecker *et al.* 2013; Eggers *et al.* 2021). In addition, the sight and significance

[4] The number 27 refers to the numbers of inventory entries. However, one inventory number consists of bone fragments of at least two individuals. It cannot be excluded that the additional fragments belong to one of the other inventory numbers.

[5] The entry reads as follows*: "West Ovamboland. 27. Schädel aus West Ovamboland. Geschenk v. Capitan Hahn. Collektion Kustos Dr. Viktor Lebzelter"* (Inventarbuch Anthropologische Abteilung NHMW, fol. 227).

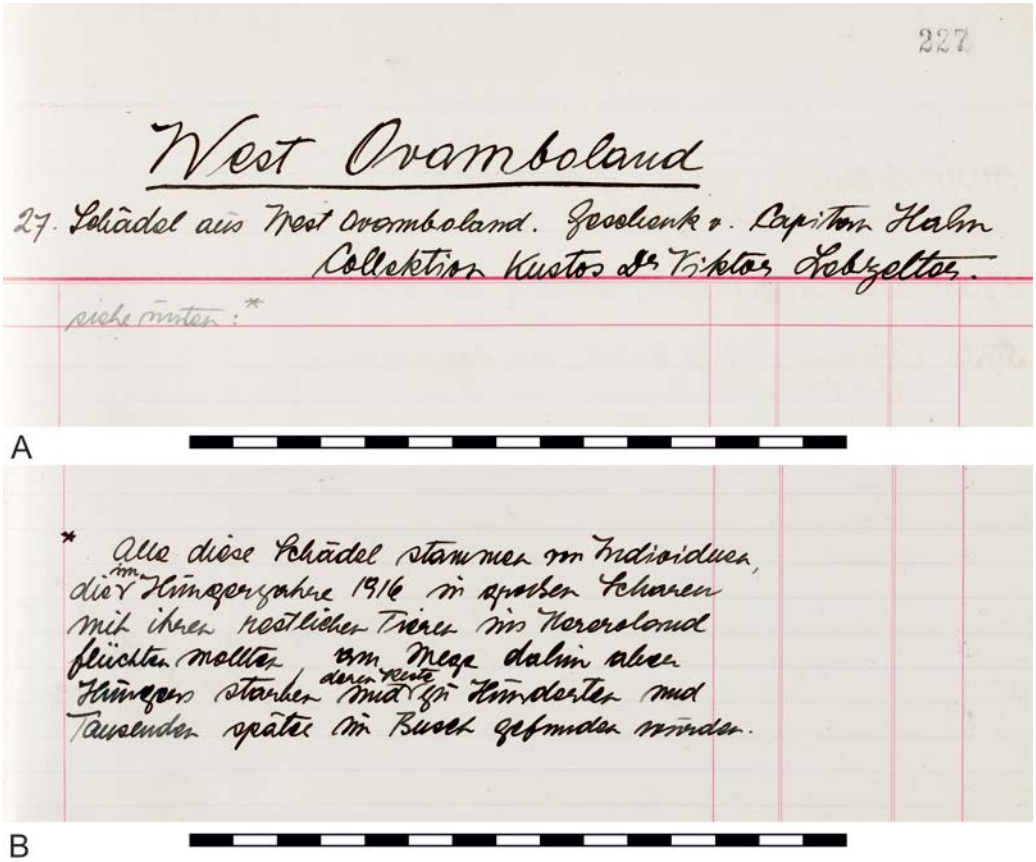

Fig. 1. Entry in the inventory book of the osteological collection of the Department of Anthropology, NHMW (**A**: page 227 and **B**: page 229) with reference to "Capitan Hahn" and 27 skulls from West Ovamboland. (The translation into English is given in the main text.)

of human remains often evokes strong feelings, especially when involved with all sorts of unethical processes (Berner *et al.* 2011; Fforde *et al.* 2020).

Thus, repatriation of human remains, mainly from western institutions to communities of origin in the Americas, in Oceania, in Asia, and Africa, has been the aim as well as the reality of many communities and institutions. These efforts have been reinforced by the adoption of the United Nations Declaration on the Rights of Indigenous People (UNDRIP) in 2007 which states in article 12 that Indigenous people have the right *"to the repatriation of their human remains"*[6]. Although the repatriation of human remains date back to almost a century, it has grown significantly since the establishment of official repatriation programmes in numerous countries, such as in the US (with NAGPRA,

[6] https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

1990), Australian Government Policy on Indigenous Repatriation (2011), and in New Zealand (with the Te Papa Tongarewa Repatriation Programme, 2003), to cite but a few (McKeowan 2020). In South Africa, a National Policy on the Repatriation and Restitution of Human Remains and Heritage Objects is under consideration in Parliament. It would probably make returns within the Southern African region possible, for example from South African museums or universities to Namibia (Rassool 2020: p. 11). For Southern Africa but especially in Namibia, late Jeremy Silvester was deeply engaged during decades in the restitution of looted museum objects and human remains. In 2019, a Working Group on the Namibian National Committee for Human Remains and Hertitage Objects (HRC) had been established which was endorsed by the Ministry of Education, Arts and Culture and is chaired by Alma Mekondjo Nankela (Nankela & Silvester 2021).

As far as Namibia is concerned, repatriation of human remains has taken place mostly by German institutions, involving human remains (and a few objects) from the Central and Southern parts of the country which were transferred to Germany during the colonial period (see contributions by Hillebrecht 2013; Förster 2013; Wegmann 2013; Förster *et al.* 2018; Kössler 2018; Stoecker & Winkelmann 2018; Shigwedha 2018; LeGall & Mboro 2019; Nankela & Silvester 2021).[7] Between 2011 and 2018 as many as 82 human remains collected between 1894 and 1912 were returned to Namibia from Germany (Stoecker & Winkelmann 2018; Nankela & Silvester 2021). So far, only few human remains from Northern Namibia – classified as "Ovambo" by the respective collectors – were found in German institutions (Silvester 2017). Many more human remains are still kept in South Africa (Silvester 2017), whose provenance has not yet been published. We expect that some of them might have had a comparable provenance to that of the human remains studied herein. Furthermore, Namibia is in exchange with South Africa regarding repatriation issues, while South African museums themselves plan to include repatriation in their agenda for decolonizing their museums (Silvester 2017). The North was indeed situated outside the so-called Police Zone, the area effectively controlled by imperial Germany, and still politically independent. In contrast, Central and Southern Namibia was most affected by the German-Namibian war 1904–1907 which included the genocide of 1904. Not only were the majority of the Herero- and part of the Nama-speaking people killed by German forces, but also was the surviving population subjected to legal regulations, including the notorious Native Ordinances of 1907 (Drechsler 1980; Bley 1996; Zimmerer & Zeller 2003; Zimmerer 2004). Similar mechanisms could only be implemented in the North after South Africa took possession of this region. Over time, all indigenous Namibian communities were weakened by military defeat, racist colonial policies as well as intentionally inflicted hunger and poverty. In the view of today's discussions on postcolonialism and indigenous rights, collectors and middlemen sent by Germany but also by other countries took

[7] Repatriations of Human Remains are documented in the E-publication "Care of Colonial Collections of the German Museums Association". https://www.museumsbund.de/wp-content/uploads/2021/02/e-reader-care-of-collections-from-colonial-contexts.pdf.

advantage of opportunities to collect what they could, in order to augment the variability and the quantity of human remains to be housed and studied in European museums (Zimmerman 2001). Some of them came from the then Austro-Hungarian empire or after its demise, the Republic of Austria (Sauer 2008: pp. 14–20). When viewed in the context of the time, the actions of these men were embedded into the prevailing mindset of Western mainstream thought. However, how this would influence communities of origin, was not a matter of contemporary discussion. From today's point of view the collectors' actions raise ethical questions.

Provenance research in Austria's museal collections is by no means a recent endeavour, focusing initially on NS contexts and art.[8] The largest collection of human remains in Austria belongs to the Natural History Museum Vienna (NHMW). Until fairly recently, provenance research of human remains occurred on an ad-hoc basis, in response to requests from communities or institutions of origin. Research continued in a more systematic manner and under better financial support with the ForMuse project (Teschler-Nicola 2013). More intensive research began in 2017, following interdisciplinary meetings on provenance and repatriation, launched by the Federal Ministry for Arts, Culture, the Civil Service and Sport. Two-thousand-and-nineteen saw the implementation of research projects on colonial provenance in different types of collections held by four federal museums, one of which is the NHMW.[9] One part of the project of the NHMW aims at reconstructing the provenance history of some of the convolutes of human remains. In parallel, our own research on human remains from Namibia housed in the NHMW also began in 2019 with the joint work of a historian, anthropologists and graduate students. Our aim in this paper is to unravel the contexts under which the Namibian remains came to the NHMW and to clarify the circumstances of their acquisition. In face of the incompleteness of the remains as well as the scarcity of individual contextual details, we juxtapose the taphonomic features present on the remains onto the historical accounts of the time they were collected. Finally, questions are raised with regard to the ethical quality of their acquisition.

Methods

Historical analysis

As far as the context of acquisition is concerned, the following sub-chapter is mainly based on academic literature, as available in local libraries (including the specialised collection of the Southern Africa Documentation and Cooperation Centre/SADOCC in Vienna) or, in some cases, online. Primary sources could be used during a research stay

[8] On repatriations in regard to the 1998 Art Restitution Act of the Republic of Austria concerning objects in federal museums and collections see: https://www.provenienzforschung.gv.at/en/kommission/sammlungen-des-bundes/

[9] https://www.nhm-wien.ac.at/forschung/projekt_koltext

in Windhoek in the National Archives of Namibia which keeps the documentation produced by the German colonial administration. This includes a file on Lebzelter's research trip to Namibia, which, however, barely goes beyond routine matters. Unfortunately, it was not yet possible to inspect Carl H. L. Hahn's papers as well. For contextualisation, Lebzelter's own published accounts regarding his research venture in Southwest Africa were also used.

Bioarchaeological Analysis

In order to ascertain if the provenance research carried out herein aligns with the evidence derived from the skeletal remains, a bioarchaeological re-analysis was conducted. This re-analysis highlights the taphonomy and health indicators of the remains. The analyses can also elucidate aspects of the lived experience of the individuals the skulls belonged to and highlight what happened to their remains after their death. The osteological analysis followed commonly used methods to assess taphonomy, sex, age at death, and health status. Due to the fact that only partially preserved skulls without dentition or any postcranial elements were represented, severe limitations in the reconstructed biological profile as well as the health status had to be taken into consideration. Of the preserved human remains, 26 could be included into the bioarchaeological analysis.

Taphonomy

Visible damage caused by the bones' environment (taphonomy) was recorded with the aim of collecting indications for the provenance of the human remains. We tried to separate the taphonomy of the skulls into changes affecting the remains in-situ and after collection from their initial resting place. In order to estimate the timespan, the remains were exposed to the elements, weathering was recorded following the stages from Behrensmeyer (1978) and Miller (1975). Additionally, marks from potential scavenging animals were assessed (Buikstra & Ubelaker 1994). Any treatment and modification on the remains in connection with the process of cataloguing, conserving and curating were noted.

Due to the potential context of injustice surrounding these human remains, only macroscopical assessment was deemed appropriate while handling the remains. Destructive sampling for molecular and chemical analyses would need ethical review by an appropriate commission and approval of the communities of origin.

Sex and age at death estimation

Sex was estimated assessing sex diagnostic indicators on the skull (Ferembach *et al.* 1979; Buikstra & Ubelaker 1994). Since there was considerable damage to the facial bones and the base of the skulls, including the mastoid process, sex estimation could only rely on a few limited indicators. It should be noted that there is considerable overlap

between morphological features of biological sex on the skeleton and the most useful indicators are found in the pelvis. Consequently, sex estimation based only on the skull is less precise (Klales 2020). Additionally, Lebzelter's original sex estimation was replicated alongside the most likely biological sex estimated in the re-analysis (Table 1).

Cranial suture closure was the only achievable aging method. We only determined rough age categories of adult and non-adult. A more detailed age-at-death-estimation was not attempted due to the unreliability of suture closure patterns (Buikstra & Ubelaker 1994). However, Lebzelter's original age determination was replicated (Table 1). Unfortunately, a clear definition of Lebzelter's age categories could not be found in his records.

Pathology

Pathological changes and trauma were visually assessed (*e.g.*, Ortner 2003; Buikstra 2019; Schultz 1993, 2001). Macroscopic assessment was aided with a handheld lens with 10× magnification under artificial light, as well as an endoscope (General Electrics XLGo A5020) to access endocranial surfaces and sinuses. Cribra orbitalia (CO), *i.e.*, pathological changes on the orbital roofs of the frontal bone, related to poor health and/or nutritional deficiencies during childhood or taphonomic processes, were recorded and scored following Steckel *et al.* (2018).

Pathological changes in the sinuses were analysed in any observable sinuses using the features described in Boocock *et al.* (1995) and Schultz (1993, 2001). Skulls were scored as showing presence or absence of changes indicative of chronic sinusitis following the same approach as Merrett & Pfeiffer (2000) and DiGangi & Sirianni (2017). Osteological changes on the endocranial surfaces were recorded following the features described in Schultz (2001) and Lewis (2004). Endocranial lesions were assessed using a four-score system, similar to the scoring used for CO (Table 1).

In order to consider the degree of preservation, only the prevalence of pathological changes on sufficiently preserved bones was calculated, which is often referred as the true prevalence rate (TPR). This means that only the proportion of pathology in observable sinuses, orbits and endocranial surfaces instead of the total number of skulls was determined (Davies-Barrett *et al.* 2019).

Results

Ovamboland: Independent kingdoms, interregional trade networks, colonial conquest

According to Lebzelter's information, the 27 skulls under consideration originated in "Western Ovamboland", *i.e.*, in Northern Namibia. This is the most densely populated area of the country adjacent to the Angolan border. With the exception of Zambezi Region, the Namibian North was politically independent from European powers, both

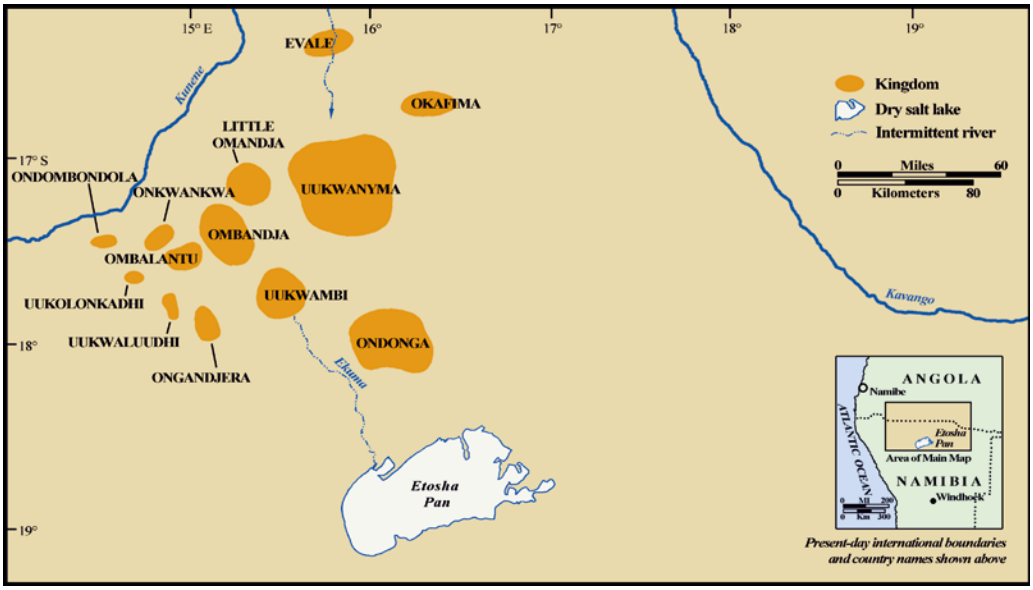

Fig. 2. Communities of the Cuvelai Floodplain (Ovamboland), Mid-Nineteenth Century. Source: modified after McKittrick 2002: p. 31.

from German South West Africa in the South as well as from Portuguese West Africa in the North. Until its conquest by Europeans shortly before and during World War I, the vast region was traditionally governed on the basis of early feudalism and, as far as state structures were concerned, divided into a dozen or more kingdoms.[10] Talking about the Western part only – called Ovamboland during the time of South African occupation – most kingdoms were relatively small, the biggest one being Uukwanyama which combined territories in southern Angola as well as northern Namibia (see Fig. 2).

Generally, they were situated along important trade routes across the Kunene River. Origins of state formation are traceable back to the 17th century, with royal institutions of some strength only emerging during the 18th and early 19th century. Even then, the position of kings (and a few queens) remained precarious; in one case, in Ombalantu, kingship was even abolished in favour of a joint decision-making system of lineage heads and spiritual leaders (Wallace 2011: pp. 75–102; Williams 1991; McKittrick 2002).

From early times, Ovambo kingdoms were integrated into long-distance trade networks, exchanging commodities like iron ore, copper, and salt. Established trade partners in the North were several feudal states in Angola, and in the South Herero and Nama polities in

[10] The number varied over time. At present, Namibia recognises eight traditional authorities in former Ovamboland (now called the regions of Oshikoto, Ohangwena, Omusati and Oshana), and five in Kavango (now Kavango West and Kavango East regions). See Government Gazette of the Republic of Namibia no. 1828, 31 March 1998 (https://laws.parliament.na/cms_documents/gg-1828-fee289f8e4.pdf) and The Namibian, 30 March 2004 (https://www.namibian.com.na/7048/archive-read/Okalongos-got-the-Authority). Cf. Hinz & Namwoonde (2010: pp. 15–276).

central Namibia (Clarence-Smith & Moorsom 1977: pp. 99–102). Around the mid-19th century, this situation began to change and European trading interests increased. They were represented on the one hand by Portuguese traders who established themselves along the Angolan coast and part of the hinterland, and on the other by Dutch or English businessmen in the British Cape Colony. In terms of European demand, ivory and slaves became preferred items, supplemented by ostrich feathers and cattle. Bartered goods in exchange were weapons and luxury products from Europe – firearms and horses, clothes and alcohol. In terms of events, the presence of Portuguese traders in Ovamboland is first recorded in the early 1850s; in Kavango, the neighbouring region towards the East, already a few years earlier. One of these "Portuguese" was actually a Habsburg subject: László Magyar from Hungary who arrived at the court of King Haimbili of Uukwanyama in 1852 (Szabo 2007: p. 140; Williams 1991: pp. 122–123).[11] Five years later, two envoys of the Rhenish Mission Society, together with European traders, reached Ondonga from the South, Carl Hugo Hahn and Johannes Rath – the latter of Viennese origin (Wallace 2011: pp. 87–88; Strommer 2012: pp. 40–42). But only in 1870, a permanent Lutheran presence was established in northern Namibia, namely the Finnish Mission led by Martti Rautanen, with permission of King Shikongo of Ondonga. At other Ovambo places, also catholic missionaries tried to establish themselves, but were more successful in neighbouring Kavango (Wallace 2011: pp. 93–94).

Although the kingdoms were still able to retain their independence, European influence, both commercial and religious, instigated wide-ranging changes (Wallace 2011: pp. 85–102; McKittrick 2002: pp. 52–89; Clarence-Smith & Moorsom 1977: pp. 102–106). As the kings controlled inter-regional commerce, they were able to monopolise profits and to use imported goods for their own benefit. As a result, authoritarian tendencies in society grew while participatory traditions became weaker. Due to ongoing slave-raiding, several kings are remembered as particularly brutal, for example Nuyoma of Uukwambi (1863–1875) (Williams 1991: pp. 131–133; with regard to interpreting missionary reports, however, see McKittrick 2003). Tensions within the ruling clans increased, particularly when it came to succession disputes. Growing competition for slaves and ivory led to regional instability as military attacks against neighbours were now initiated not only, as previously, on the basis of political or dynastic deliberations but also because of economic interests, stimulated by colonial trade. Regional warlords took developments into their own hands and started raiding. Furthermore, the availability of guns and ammunition made warfare more cruel as fire-arms were more effective than traditional weapons. In essence, societies were increasingly destabilised as people fled in their numbers from one kingdom to another to avoid captivity. Others went to the German territory – the so-called Police Zone – where migrant workers were in demand. Both developments led to the decline of agricultural productivity, and the cattle plague 1896/1897 had a disastrous effect on livestock. Hunger and starvation were thus already present in some areas in Ovamboland at the turn of the century, and political instability grew.

[11] We take the orthography of all royal names as well as the dates of their rule from Williams (1991: pp. 189–193).

In realising their precarious status, several Ovambo kings signed "protection treaties" with the German administration in the South. These contracts remained of little practical value, however (Wallace 2011: pp. 101–102; Williams 1991: pp. 148–150). The German outpost in Namutoni was even destroyed by the Ndonga army in 1904. On the northern frontier, Portugal was successful in expanding its territory southwards into the Ovambo/Kavango region by attacking local kingdoms by force. After protracted wars, they managed to conquer the Angolan part of Ombandja ("Little Ombandja") in 1907 (Williams 1991: pp. 163–166). Later, in August 1915, they defeated Mandume ya Ndemufayo, the young king of Uukwanyama who was forced to retreat from his Angolan residence to the South (Hayes 1993).

In July 1915, shortly after the outbreak of World War I, German South West Africa collapsed under the Union of South Africa's military intervention (L'Ange 1991; Strachan 2004: pp. 61–92). In terms of imperial politics, one of the challenges following the conquest was whether the Ovambo and Kavango kingdoms in the north would, in perspective, rather fall prey to Portuguese, or to British/South African domination. Already in August 1915, only a few weeks after German surrender, the South African military government in Windhoek was able to set up a base in Ondonga, with permission of King Nambala ya Kadhikwa (1912–1942), baptised Martin (Wallace 2011: p. 200; for an assessment of King Martin's ambiguous role, see McKittrick 2002: pp. 142–144). While this manoeuvre went ahead via negotiations and bribery, other means were considered necessary to subjugate Uukwanyama, which still remained outside South African – and generally European – control. In February 1917, South Africa dispatched a military expedition to crush Uukwanyama's army. King Mandume was killed or – as oral traditions relate – committed suicide (Williams 1991: pp. 153–156).

Besides the disruptions of the war and European technological supremacy, it was the partial social destabilisation of Ovambo societies which made South Africa's easy expansion into northern Namibia possible. Another favouring factor was the severe drought, caused by the absence of rains for two years. In 1916, it resulted in *"one of the most destructive famines of the twentieth century – remembered as ondjala yawekomba, the 'famine that swept'"*. (McKittrick 2002: pp. 144–151; Hayes 1997: pp. 126–129 and pp. 134–136). Between 20.000 and 30.000 people are estimated to have died of hunger; women, old people, and children were particularly vulnerable. Most heavily affected were Little Ombandja and northern Uukwanyama (both in modern-day Angola) where the Portuguese had destroyed grain stores and seized cattle. Many Kwanyama people moved to the southern part of their kingdom, while Mbandja invaded Western Ovamboland. As their plea for food was rejected in Ombalantu, many of them died, their remains lying around unburied in the vicinity of settlements (McKittrick 2002: pp. 147–148). At the same time, scores of starving men, women and children from Ombalantu fled onwards to Eastern Ovamboland where the food situation was said to be better (Hayes 1998: p. 122). When, in Ondonga, they were also refused food, they continued further south. Similarly, others – mainly men – went south into the Police Zone to look for work. Some of these emigrant groups arrived indeed at the railway town of Karibib (central Namibia) or even the far-away diamond mining centre

of Lüderitz (Gewald 2003). Others, however, were not able to reach their destination and died along the way, as did many of those families or individuals who tried to escape starvation by moving southeast. *"Abandoned corpses of those who did not survive the journey out of the north littered the road* [between Tsumeb and Ondangwa] *upon which South African officers drove on their first venture into Ovamboland."* (Hayes 1998: p. 122). A photograph allegedly illustrating the situation *"along the road to Tsumeb"* around 1920 indeed shows a number of skulls arranged somewhere in the bush (Schwarz 1920: p. 118 and plate II). A more precise context of the depicted remains needs further investigation.

Viktor Lebzelter's Research Venture in Ovamboland

About a decade later, in 1927, Viktor Lebzelter went to Ovamboland in the course of his – and his wife's – research stay in South Africa (Lebzelter 2005: pp. 145–157). Lebzelter was an Austrian physical anthropologist who served in the Department of Anthropology of the Natural History Museum in Vienna. In 1934, he was appointed as its Director but died prematurely two years later (Lebzelter 2005: pp. 11–13; Österreichisches Biographisches Lexikon 1972: p. 68; Fuchs 2003: pp. 283–285; for the institutional context, see Pawlowsky 2005). Lebzelter was affiliated to the Vienna School of Anthropology which was based on anti-modernist catholic doctrines but opposed to national socialist race ideologies (Marchand 2003). His research venture to Southern Africa 1926–1928 was partially financed by the Holy See and instructed to investigate South Africa's pre-historic past, giving particular reference to the role of "bushmen", and to research their contemporary situation in South West Africa and Southern Angola; if possible, anthropological surveys were also to be undertaken among Bantu- and Khoi-speaking groups (Lebzelter & Schmidt 1926: p. 952). The latter point corresponded well with Lebzelter's own interest to conduct as many anthropometric measurements as possible – in the end, he surveyed more than ten thousand men, women and children in South Africa, Namibia and Angola, most of them non-San (Lebzelter 1928: p. 360). Lebzelter also took photographs, collected artefacts, ethnographica, and human remains as well as some natural history specimens (Lebzelter & Schmidt 1926: pp. 957–958; Lebzelter 1929: pp. 234–239, 1930, 1934).

Ovamboland was restricted to European travellers (Miescher 2012: pp. 771–773 and p. 776). In order to visit it, Lebzelter needed a permit from the South African administration in Windhoek. As the government files on his application inform us, he was recommended by the South African geologist Ernest Hubert Lewis Schwarz and, moreover, by Louis Fourie, the then South African Medical Officer in South West Africa.[12] In March 1927, Lebzelter was granted entry into Ovamboland and several letters of endorsement were written to district and local authorities in the whole territory, including to colonial officials and missionaries in the North. *"Without your help*", Lebzelter wrote to Fourie, *"and the help of the magistracies* [sic] *and the police* [!] *it would not be possible to do*

[12] National Archives of Namibia (NAN), SWAA 1328, A 198/3/7 and NAO 26, 19/3. The files cover various administrative aspects of Lebzelter's tour (routes, financial assistance, weapons, personel, recommendations etc.). To deal with them here in more detail would go beyond the scope of this study.

my work in such extensive [sic] *manner as I can do this now"* (letter from Engela, dated July 24, 1927, p. 3). A request for financial assistance however was refused.

In Ovamboland, the position of Native Commissioner was held by Carl H. L. Hahn (vulgo "Cocky" Hahn), grandson of the aforementioned Lutheran missionary, since 1920 (Hayes 1996). As South Africa's presence in the northern regions was extremely scant – *"less than ten officials"*, as Wallace (2011: p. 210) puts it – Hahn had to rely on diplomacy and "divide and rule" tactics to secure cooperation from the kings. They, on the other hand, were aware of the benefits they could obtain for themselves by remaining in good standing with the Commissioner. But they also feared South Africa's military capacity, particularly the warplanes which stood in stand-by mode further south and from time to time flew across the kings' settlements for intimidation (Lebzelter 1934: p. 241; Silvester *et al.* 1988: p. 23). Lebzelter's (and other researchers') intentions to conduct anthropological measurements on Ovambo people thus became entangled in complex interactions between the Native Commissioner and traditional rulers – a complexity that the Austrian scientist noticed but could hardly understand (Lebzelter 1934: p. 192).

Lebzelter was provided with recommendation letters by the South African government in Windhoek addressed to the rudimentary colonial administration in the North. To enforce them was not easy, however – and certainly there was no police force to do it. It was largely up to the traditional rulers to allow, or to prevent, their subjects to make themselves available to be surveyed in such numbers the scientist thought necessary – *i. e.*, in their hundreds. Support by South Africa's administration was important but not necessarily sufficient, as becomes clear from Lebzelter's own reports. The ambiguous king Nambala (alias Martin) of Ongonda received him and a Mr. Tompson [probably Thompson], according to Lebzelter a Deputy Native Commissioner, with all honours, and the recruitment of individuals went easy (Lebzelter 1934: pp. 240–241). Three other kings, however, who resided at distant places and seemingly enjoyed greater autonomy, showed resistance: Tshaanika Tsha Natshilongo (1887–1930) in Ongandjera (Lebzelter 1934: pp. 243–244; for a photograph see Hartmann *et al.* 1998: p. 95), Iipumbu ya Tshilongo (1907–1932) in Uukwambi (Lebzelter 1934: pp. 241–242; see Hartmann *et al.* 1998; photos in Hartmann *et al.* 1998: pp. 77–81) and Mwaala gwa Nashilongo (1907–1959) in Uukwaluudhi (Lebzelter 1934: pp. 242–243). In each case, it came to lengthy disputes. Lebzelter threatened the kings with the authority of the far-away Governor, and only the influence of local missionaries made it possible to find some compromises in the end.[13] No wonder that Lebzelter portraits the kings in a derogative, even racist way.[14]

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[13] The balance of forces is clearly mirrored by the numbers of individuals Lebzelter was allowed to survey in the respective entities: In Uukwanyama, after its military defeat ruled by a representative of the Native Commissioner, they amounted to more than a thousand. Next came friendly Ondonga with 699. The three other kings made far fewer numbers of their subjects available: Uukwambi 382, Uukwaluudhi 334 and Ongandjera only 188 (Lebzelter 1928: p. 360).

[14] A partial exception was King Mwaala who told Lebzelter the history of the Uukwaluudhi, creating the impression of a *"particularly prudent and well-meaning man"* (Lebzelter 1934: p.195; but see Lebzelter 1934: pp. 242–243).

Provenance of human remains partly unclear

Currently, there are 27 inventory numbers (Inv.No.) housed at the Natural History Museum Vienna in the Department of Anthropology that pertain to human remains brought into the collection by Lebzelter from Namibia. In Inv.No. 5949, we observed fragments belonging to at least two individuals. It cannot be excluded that the additional fragment from Inv.No. 5949 belongs to any of the other individuals. Therefore, the number of individuals represented by the remains, presented in this article, varies between 27 and 28.

As far as the acquisition of the Ovambo skulls and related circumstances is concerned – our point of departure – Lebzelter provides us with the following narrative:[15] (1) that during the big famine in 1916, "thousands" of Ovambo people tried to make their way to Hereroland but died along the way, particularly on the "route of thirst" (see below). Furthermore (2), that Captain Hahn, in 1926, ordered these human remains as far as possible to be collected. Finally (3), that the Commissioner sent some of these skulls to the South African Museum in Cape Town while 24 [sic] others, already severely damaged, he donated to Lebzelter – who must have been extremely interested in human remains, as he had hardly been able so far to obtain any.[16]

Generally, this account does not sound unlikely. It is known that during the "famine that swept", many individuals either within Ovamboland or on their march to the Police Zone died from hunger and exhaustion, and that their corpses were left in the bush. However, some inconsistencies in Lebzelter's information remain. To begin with, it cannot be ascertained when – or whether at all – Lebzelter and Hahn met. In several publications, Lebzelter indeed attributed the Ovambo skulls to the "kindness" of Hahn[16] and expressed thanks to him and his spouse (Lebzelter 1929: p. 233). He once even refers to an anecdote (Hahn running into twelve lions) which could have been communicated to him in a personal conversation; on the other hand, it might have been a story known to everyone (Lebzelter 1929: pp. 188–189). We do know however that in July 1927, the month Lebzelter arrived in Ondonga, Hahn was absent as he had left for Kaoko.[17] This would explain why not Hahn but Mr. Thompson accompanied Lebzelter to King Martin. According to Lebzelter's further account, he spent most of his free time in Ondonga in company of the European trader Leuch's family, and thus not with the Hahns (Lebzelter 1934: p. 192).

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[15] Lebzelter, Schädel aus Westovamboland, p. 1 (NHMW, Somatologische Sammlung, Inv.No. 2635).

[16] To explain the difficulties encountered in acquiring human remains, Lebzelter refers on the one hand to the legal protection of "natives' graves" within the Police Zone. On the other hand, he complains about high prices charged by "bushmen" outside the Zone for allowing the opening of graves of deceased relatives. Mostly due to Hahn's kindness, he continues, he was eventually able to "bring home" appr. 35 skulls and skeleton parts (Lebzelter 1928: p. 361, 1934: p. 9; the number of individuals represented by the skeletal remains diverges between different sources of information). Furthermore, Lebzelter had the opportunity to research Fourie's personal collection of skulls (source NHMW, Somatologische Sammlung Inv.No. 2635, Schädel aus der Sammlung von Fourie).

[17] Lebzelter's letter from July 24, 1927, p. 3 (NAN, SWAA 1328, A 198/3/7).

When exactly Carl H. L. Hahn returned to his office in Ondonga (in modern-day Ondangwa) and whether at that stage a meeting took place between the two, is presently not known; Lebzelter left Ovamboland at the latest in early September for Etosha where he surveyed Hai||om individuals – the dates given by his granddaughter are not fully precise (Lebzelter 2003: p. 59). Somebody other than Hahn could of course have provided the Austrian anthropologist with human remains in the absence and by order of the Native Commissioner. But to know whether Lebzelter met Hahn in person and was able to discuss the issue with him would strengthen the *reliability of the information* he passed on to the museum later.

At this point, two further inconsistencies emerge. Evidently, Carl H. L. Hahn was intrigued by human remains lying scattered around in the bush. This is amply demonstrated by notorious photographs of sun-bleached skulls and bones, framed as a mockery of German colonialism (Hayes 1997: pp. 137–138, 1998: fig. 7 and 8). At one stage, *"he asked local people to bring in human remains and this resulted in the collection of 81* [only!] *individual remains"*.[18] Was this the 1926 initiative Lebzelter refers to, or were there other efforts as well? Hahn is recorded to have sent human remains from Ovamboland, altogether between thirty and forty, to the South African Museum in Cape Town in 1918 and 1921, but not in 1926 (Legassick & Rassool 2015: p. 70 and 251; Hayes 1997: p. 141; the number is not precise because the provenance of some remains is unclear). We note that the number of human remains made available for anthropological research is very small. As mentioned above, the number of people who died from the hunger catastrophe is estimated at about 20.000 to 30.000. Most of them perished in the northern parts of Ovamboland (presently Angola), many others in its western part (today in Namibia) where the South African presence in the 1920s was very low. How many of them managed to reach Ondonga and then continued in the southeastern direction is not known. Lebzelter speaks of *"hundreds or thousands"*, who perished on that latter route. It might have been the easiest for Native Commissioner Hahn, who resided in Ondonga, to have their remains collected from the vicinity while corpses of people who perished further inland were more difficult to access. Could it actually be possible that there was a "shortage" of human remains when Lebzelter, an interested and highly recommended visitor, arrived in 1927, so that only incomplete skulls were available for him?

That, thirdly, raises the question when and where the 27 skulls were *originally* collected. Lebzelter's hint at the "route of thirst" is actually confusing.[19] "Thirstland", as it was also called, separated Ovamboland from the South, estimated by Lebzelter at appr. 200 kilometres (on the modern road appr. 250), in any case a tremendous walking distance for starving people. Contemporary observers reported particularly the second half of the route as the place of death for many: "[…] *the road between Numutoni and*

[18] Personal correspondence to the authors by Jeremy Silvester, Museums Association of Namibia, April 27, 2019. In addition to the 81, IZIKO Museums report a further 20 human specimen "probably" taken from Namibia and until today kept in Cape Town, 46 of all classified as "Ovambo" (Silvester 2017: p. 5).

[19] Lebzelter, An den Fürstenhöfen des Ambo-Landes, p. 1 (NHMW, Somatologische Inv.No. 2604/15).

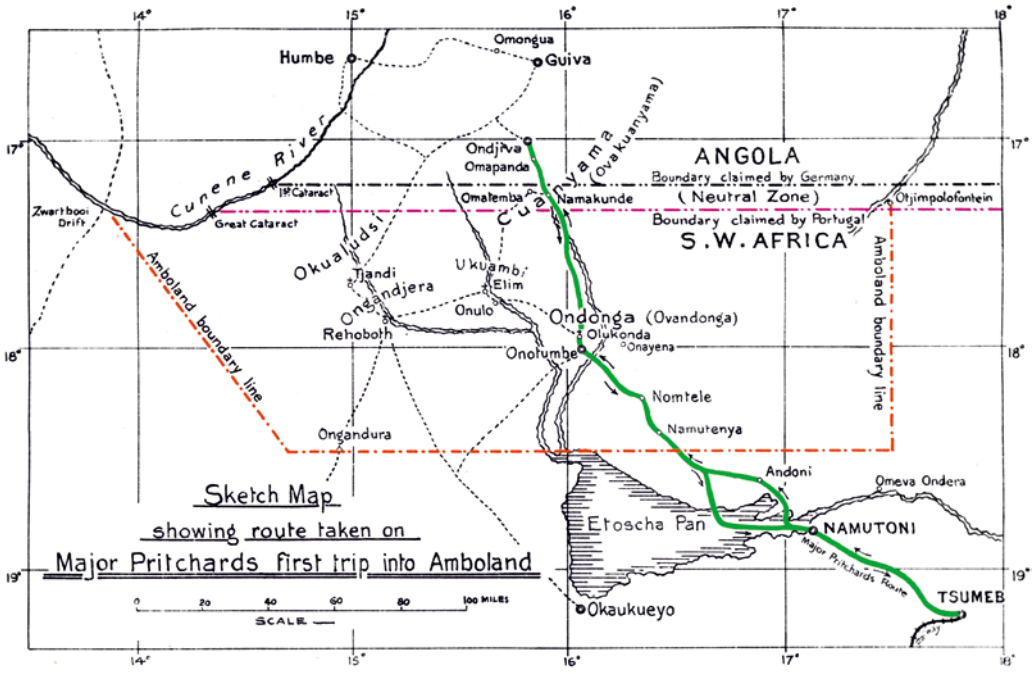

Fig. 3. Area between Tsumeb and Ondangwa (note Ovamboland border between Andoni and Namurenya). Source: Cambridge University Library ("Sketch map showing route taken on Major Pritchard's first trip into Amboland [i. e. Ovamboland], 1915", Item Reference Code: GBR/0115/RCS/Y3057A/2).

Otjicotto [sic] *is, so to speak, lined with dead bodies"*, the South African officials said in 1915 (GEWALD 2003: p. 223), and three years later geologist H.L. Schwarz confirmed that *"even close to Tsumeb* [!] *one sees the white skulls in the bush"* (SCHWARZ 1920: p. 118; see Fig. 3 for a geographical overview).

"Close to Tsumeb" or "between Numutoni and Otjicotto" however, in fact the whole notorious second half of the route from Ondonga to Tsumeb, was outside the territory the Native Commissioner was in charge of.[20] Is it indeed likely that Hahn sent people to collect human remains from an area outside Ovamboland? In contrast, Patricia Hayes maintains that *"most human remains above ground that resulted from the Famine* […] *were located in western Ovamboland"*.[21] Accordingly, she locates the various photographs Hahn took of bones and skulls in 1917 in western rather than eastern Ovamboland, or even in Uukwanyama further north (HAYES 1997: pp. 129–134; MCKITTRICK 2002: pp. 147–148). This would probably also apply to the picture reproduced by Schwarz

[20] LEBZELTER 1934: p. 188 and map p. 81 locates Ondonga's border at appr. 30 km north of the waterpoint of Osohama (see MIESCHER 2013: p. 302). The border as shown in Fig. 3 seems to be even farther from Andoni towards Northwest – in any case not close to Tsumeb or Otjikoto.

[21] E-mail to the authors of this contribution, 28 April 2019.

mentioned above. Did the skeletal remains Lebzelter acquired in fact come from western or northern Ovamboland rather than from the "route of thirst"? Or, as Jeremy Silvester suggests, had the Commissioner cleared only the surroundings of Ondangwa of human remains and not Ovamboland's distant parts[22] – and therefore only few remains were available?

Two possible scenarios come to mind. The first one: Lebzelter did not have sufficient information on how and where the skulls were collected, be it because he did not meet Hahn in person or for other reasons. From his relations with Fourie and Schwarz however he must have been aware from the outset that on the road from Tsumeb to the Northwest dead bodies (or their remains) were to be expected. Thus, he might have concluded that "Thirstland" was the origin of the skulls he received in Ondonga. The second one: Lebzelter could have picked up human remains himself when travelling to or back from the North. In that case it remains open why he refers to Hahn as the one he obtained the human remains from. Since neither of the scenarios can be proven, one has to conclude that sources available at present do not allow us to conclusively reconstruct the details of the acquisition processes of these human remains.

The path and inclusion in the museum's inventory

While still in South Africa, Lebzelter sent boxes with his collections to Rome and to the monastery St. Gabriel, the centre of the Vienna School of Anthropology (Lebzelter 2003: p. 114 and pp. 192–194). The collections of predominantly archaeological artefacts were intended for the newly established Missionary Ethnological Museum, then in the Lateran Palace (Lebzelter 1930: p. XII). A certain part of Lebzelter's archaeological collection remained in South African museums (Lebzelter 1930: pp. 30, 34, and 38; Sarreiter 2019: pp. 391–395) while his archaeological artefacts and human remains, as well as all material related to his anthropological surveys were shipped to Europe. These collections were integrated into the Departments of Anthropology and Prehistory of the Natural History Museum Vienna for evaluation and preparation for publication. His botanical, zoological, geological and mineralogical specimens however, were only partly handed over to the Museum and partly remained his private property (Lebzelter 2005: p. 204). Soon after his return to Vienna, around 1930, the human remains were labelled and included in the inventory book (Inv.No. 5923–5949, 6300–6301, 6320) by Lebzelter and Gabriele Gruber-Thalmann.

Of Lebzelter's three planned book volumes on the scientific results of his Southern African venture, the first two – on prehistory (1930) and on ethnography (1934) – were in fact published. The third volume which was meant to contain his findings in physical anthropology, could not be finished because of Lebzelter's early death. However, all collected data, statistical summaries and results, together with its principle outline, can be followed from extensive preserved documents of his field research, now housed in the

[22] Jeremy Silvester's e-mail to the authors of this contribution, 28 April 2019.

Department of Anthropology in the Natural History Museum in Vienna.[23] The archival papers include preliminary analyses and lists of measurements of all the human remains as well as of comparative samples. During his time in South Africa, Lebzelter had indeed taken the opportunity to measure skeletal remains in various local museums (Albany Museum, Transvaal Museum, Museum in Durbant)[24] and private collections (such as Fourier)[25]. In addition, he included data already published, and measured other human remains kept in the Museum's Department of Anthropology in Vienna as well as some of the human remains in Rudolf Pöch's South African collections, held by the Institute of Anthropology at the University of Vienna (for the Pöch collection see Pacher 1962; Legassick & Rassool, 2015: pp. 9–30; Sauer 2012; Hoffmann 2020; Schasiepen 2021).[26]

Few years after Lebzelter's death, during the Nazi period, there was an attempt to further evaluate and publish Lebzelter's data by the museum's anthropologists Josef Wastl and Robert Routil.[27] However, this project did not go beyond the evaluation stage. Apart from that, some of the human remains collected by Lebzelter were shown in a propaganda exhibition called "Ostmarkdeutsche als Forscher und Sammler in unseren Kolonien", which took place in the Natural History Museum in 1939 (Pietschmann 1940; Oppenauer 2015). This exhibition stood in the context of National Socialist efforts to regain former German colonies. After World War I, the League of Nations had entrusted other European states (and South Africa in the case of South West Africa) with their administration. During our research in the Department of Anthropology we did not find information on whether Lebzelter's Ovambo collection was still part of other research projects or publications later on.

Anthropological investigation of the Ovambo skulls

As has been stated above the analysed remains represent at least 27, however possibly 28 individuals. Only parts of the skull, in most cases just the calvaria, are preserved, from which, all facial bones are missing.

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[23] NHMW, Somatologische Sammlung, Viktor Lebzelter. Südafrikareise 1926–1928, Unterlagen über afrikanische Schädel und Skelette, Inv.No. 2635.

[24] See footnote 23.

[25] The published notice, where it is said that Medical Officer Louis Fourier, at a later stage, *"sent his own personal collection of skulls to Vienna for Lebzelter to measure, describe and interpret."* (Wanless 2010: p. 26) can not be verified from the preserved documents in the NHM Vienna. It seems more likely that Lebzelter measured them during his time in Africa *"Der Sanitätschef von Südafrika besitzt eine kleine Sammlung von Buschmannschädeln* [...]. *Ich konnte dank seiner Liebenswürdigkeit diese Schädel messen."* NHMW, Somatologische Sammlung, Inv.No. 2635

[26] See Footnote 25.

[27] NHMW, Somatologische Sammlung, Inv.No. 2618, Viktor Lebzelter: Südafrika-Expedition 1926–1928, Reiseunterlagen und Verschiedenes**.** Letter of Josef Wastl to the Reichsforschungsrat in Berlin, 27.6.1942.

Taphonomic observations

Parallel marks on the inside surfaces of the calvaria likely constitute brush marks from the cleaning process carried out at the museum during inventory. Some of the skulls had been previously glued. Additionally, all but one were hardened on both the inside and outside. Each was labelled in black ink as "West-Ovamboland" and the respective inventory number was added.

Three of the skulls also show brownish stains and discoloration on the outside, mostly concentrated at the base of the skull (Inv.No. 5937, 5934, 5940). Viktor Lebzelter also noted such brownish discoloration in one individual (5940), and suspects that it may have been caused by bushfires.[28] However, this interpretation could not yet be confirmed and needs further investigation.

A similar state of preservation and surface texture was observed on all skulls. The bone surface on the outside of the calvaria shows signs of weathering in the form of heat cracking and flaking, as well as a bleached white to greyish colour. According to Behrensmeyer (1978), these observations can be classified as Stage 3 for all skulls, which corresponds to an unburied exposure time of 4–15 years. According to the scheme by Miller (1975), which was developed for bone weathering in desert regions, an exposure time of at least 4–18 years can be assumed. This would correspond with Lebzelter's narrative that the skulls belonged to victims of the 1915/1916 famine, who were left lying in the bush and whose skeletal remains were only collected years later.

As stated above, and is illustrated in Figure 4, the facial bones as well as elements from the centre and the base of the skull are missing in most skulls. In detail: Projecting features are frequently lost, and the inner bone structure is exposed. Most ethmoid bones are absent as well. Furthermore, in most skulls at least one mastoid process and both occipital condyles are missing. Where the base of the skull is preserved, the trabecular structure is frequently exposed. Although in a few individuals the foramen magnum is widened with sharp edges, no evidence of intentional human modification could be determined. Most edges are irregularly broken, indicating post-mortem damage. Small holes are frequently found on the base of the skulls, perhaps originating from insect activity (Vanin & Huchet 2017).

This rather uniform pattern of preservation found in the skulls, is difficult to explain. Potentially, a combination of animal gnawing, movement of the unburied skulls over the bushland floors due to exposure to the elements, and weathering could result in the observed uniform pattern. These compounding factors could explain the abrasion to the protruding structures, resulting in the spherical shape of most skulls.

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[28] NHMW, Somatologische Sammlung, Viktor Lebzelter. Südafrikareise 1926–1928, Unterlagen über afrikanische Schädel und Skelette, Inv.No. 2635, Schädel aus Westovamboland.

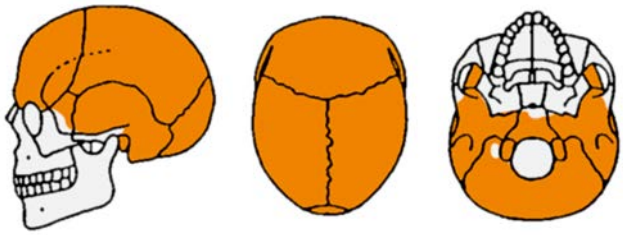

Fig. 4. Schematic overview of the almost uniform preservation pattern of the skulls. In all individuals the facial bones are missing and often the base of the skull shows strong surface erosion. (orange = present bone)

Age and sex estimation

We could only carry out very vague sex estimations, as most cranial features were missing. According to the preserved records, Lebzelter had estimated 11 individuals as female, 13 as male and 3 (of which only the calvaria are preserved) as indeterminable. Based on the assessment of the features related to cranial maturation alone (internal and external cranial sutures and the spheno-basilar junction), it can be estimated that all were adult individuals. There are no remains of subadults or adolescents among the individuals. Limited by preservation, a more precise age estimation was not feasible. Lebzelter estimated 22 individuals as adults, 3 as mature and 2 as indeterminable (Table 1).

Trauma

There are no signs of fatal injuries on any of the skulls, such as those caused by projectiles, sharp weapons or firearms. Four of the skulls, however, showed signs of trauma in the form of small healed depression fractures, three on the frontal and one on the parietal bone. In detail they can be described as follows: the male skull 5931 has a discrete healed blunt trauma on the frontal bone (16 mm × 14 mm). Skull 5942 has a small shallow depression in the middle of the frontal bone (12 mm × 10 mm), as does 5934 in the area of the left frontal boss (Ø = 9 mm). Inv.No. 5933 has a small depression on the top of the skull on the left parietal bone about 3 cm to the left of the sagittal suture (Ø = 7 mm).

Pathologies

Despite the fragmentary nature of the collection analysed herein, pathological changes could nevertheless be observed on many of the individuals (Table 1, Fig. 4).

Cribra orbitalia and vascular impressions on the orbital roof of 68.4 % (TPR) of observable eye sockets (Steckel *et al.* 2018), attest to poor health and/or nutritional deficiencies during childhood. Therefore, these changes should not be interpreted as a consequence of the deadly famine that presumably killed these adult persons. Bony changes on the

Table 1. Description of the individual human remains according to inventory number, estimation of sex and age at death and some palaeopathological observations.

inventory number	sex-Lebzelter /sex new	age category-Lebzelter	signs of chronic sinusitis	endocranial lesions	Cribra orbitalia	Trauma
5923	f/f	adult	yes	3	3	-
5924	f/f	adult	no	3	2	-
5925	m/i	adult	yes	2	2	-
5926	m/m	adult	yes	3	3	-
5927	f/f?	adult	no	3	2	-
5928	m/m	adult	yes	3	1	-
5929	f/f	adult	no	2	1	-
5930	m/f	adult	yes	1	0	-
5931	m/m	matur	no	2	1	small healed blunt force
5932	f/i	spätadult	yes	2	2	-
5933	f/f	adult	yes	2	1	small healed blunt force
5934	m/f	adult	yes	2	3	small healed blunt force
5935	m/f?	adult	yes	2	2	-
5936	f/m?	spätadult	yes	1	2	-
5937	f/f	adult	yes	1	1	-
5938	f/f	spätadult	yes	2	0	-
5939	m/m	spätadult	no	1	2	-
5940	m/f	adult	yes	2	2	-
5941	m/i	matur	no	3	0	-
5942	m/f	spätadult	yes	3	2	small healed blunt force
5943	m/m	spätadult	yes	1	0	-
5944	m/m	adult	no	3	0	-
5945	f/m	adult	yes	2	3	-
5946	f/f?	adult	no	3	0	-
5947	n.a.	matur	yes	2	0	-
5948	n.a.	n.a.	n.a.	3	1	n.a.
5949*	n.a.	n.a.	n.a.	0	0	n.a.

sex: f = female, f? = probably female, i = intermediate, m? = probably male, m = male, n.a. = non accessible
endocranial lesions: 0 = unobservable; 1 = present, no pathological changes; 2 = slight changes: some vessel impressions, slight porosity or new bone formation (NBF); 3 = severe changes: multifocal lesions, deep or extensive vessel impressions, severe porosity, extensive NBF
Cribra orbitalia stages according to Codebook in Steckel *et al.* (2018): 0 = orbits not present for observation, 1 = absent with at least one orbit present, 2 = cluster of mostly fine foramina covering a small area (≤1 cm^2), 3 = Substantial area (> 1 cm^2) covered by small and/or larger foramina with a tendency to cluster together
*fragments of at least two individuals
spätadult = in German refers to older individuals within the adult age range

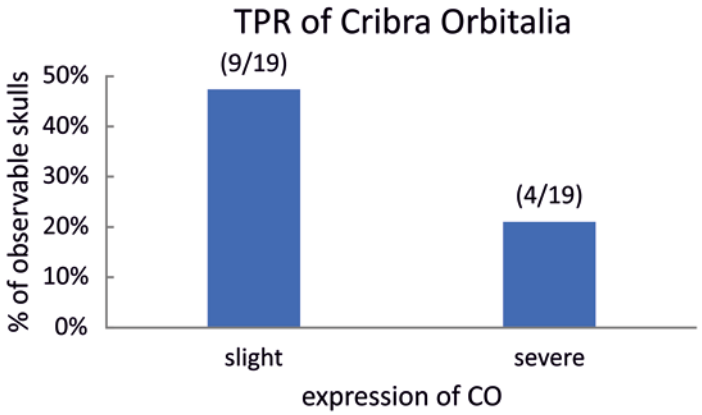

Fig. 5. The proportion of individuals with pathological changes related to poor health/nutritional deficiencies during childhood in at least one observable orbital roof. TPR = True Prevalence Rate.

internal surface of 7 out of 26 observable skulls revealed traces of pathologies that could be related to infections, caused by different pathogens, metabolic diseases as well as trauma or neoplastic conditions. Furthermore, about two thirds of the skulls showed signs of long-lasting sinusitis.

Examination of the internal surface of the skulls shows bony changes potentially indicating pathology in several cases (7 out of 26 observable skulls). The observed bony changes on the endocranial surfaces of the skulls include hyperporosity, irregular surface, abnormal blood vessel impressions and new bone formation on the lamina interna and in the sulci (sagittal, transverse, sigmoid). The lamina interna in five of the skulls displayed a mix of lesions with vessel impressions, porosities and new bone formation mostly concentrated at the parietal and frontal bosses as well as on the occipital. In two of those cases extensive branched vessel impressions and bone remodelling suggest epidural haematomas, which were in a process of healing. Two skulls showed white periosteal new bone formations and a nodulated surface restricted to and around the sulci. The observed changes are suggestive of meningeal reactions. These non-specific indicators of haemorrhage or infection of the meninges can be attributed to a variety of aetiologies, such as infections caused by different pathogens and pathways, metabolic disease as well as trauma or neoplastic conditions to name a few (Schultz 1993; Lewis 2004). However, limited by preservation and context, the most likely aetiology could not be further determined with the applied methods.

Due to the damage to the anterior part and the base of the skulls, the opened sphenoidal sinuses as well as some ethmoidal cells could be assessed for bony changes. Nodulated new bone formation, often with vascular impressions, and spiculae can be found in the frontal sinuses, the sphenoidal sinus and the ethmoid cells. Of the individuals that had at least one observable sinus, almost two thirds (64 %) displayed signs of chronic sinusitis. Sinusitis can be attributed to a range of environmental stressors

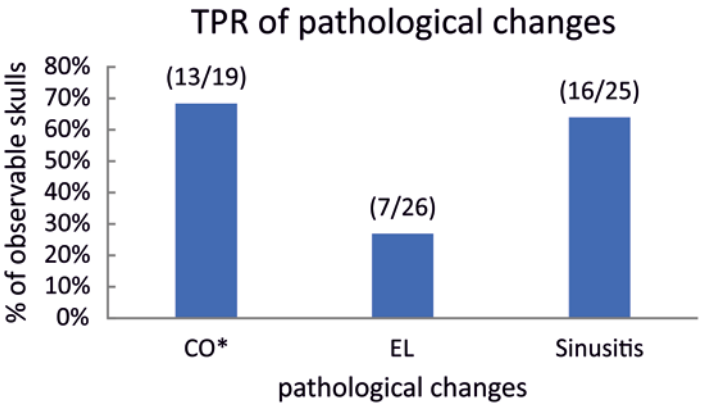

Fig. 6. Prevalence of pathological changes visible in assessable skulls for each feature. CO* includes all slight and severe cases of cribra orbitalia. EL = Endocranial lesions; TRP = True Prevalence Rate.

such as: upper respiratory infection, dust, smoke exposure, air pollution, temperature oscillations, wet and cold conditions, cold drying winds, as well as allergies (compare Boocock *et al.* 1995; Pany-Kucera *et al.* 2018; Roberts 2007). The maxillary sinuses are prone to endodontic sinusitis caused by periapical lesions or other infection of the dentition (DiGangi & Sirianni 2017). Since no maxillary sinuses were preserved to be assessed, an odontogenic origin of the observed sinus infections cannot be excluded for the observed changes.

Summary of Bioarchaeological findings

Overall, it can be summarized that the human remains show a quite uniform pattern. All the skulls belonged to adult individuals. Sex estimation could only be carried out with a low confidence level. Lebzelter assigned 40 % to be females and 46 % to be males, while our estimation assigned 46 % likely to be female and 30 % to be male. The discrepancies are due to individuals scored as intermediate or indeterminable in the re-analysis. Most of the skulls (23/27) show either one or more nonspecific pathological changes pointing to a chronically debilitated health. The causes of death were undeterminable and there is no evidence of fatal trauma visible on any of the skulls. However, taphonomic analysis suggests that all skulls must have laid unburied for several years on the ground, being exposed to weathering as well as animal activity. Therefore, evidence for trauma could have been lost.

Conclusions

The results of the osteological examination support Lebzelter's description of the post-mortem environment – unburied exposure of the skulls to sunlight for several years and subsequent removal from open soil. All of the skulls belonged to adults and most of

them reveal signs of nutritional stress and chronic illnesses. For methodological reasons, it cannot be confirmed that they were associated with the hunger crisis of 1915/1916. It can fairly be assumed that the individuals perished in the tragic context of the "famine that swept", either deep in Ovamboland proper or on their way towards the South. The hunger crisis was induced by a natural disaster – the absence of rain for two years – but exacerbated by the serious destabilisation of Ovambo societies in the late 19th century brought about by colonial impacts (such as destruction of food reserves by the Portuguese) and home-made maladministration. Seen in that light, the 27 skulls – like all other human remains taken to Europe in colonial contexts – encompass the full, often gruesome history of the area they were taken from. European scientists/collectors such as Viktor Lebzelter, were hardly aware of this wider picture. He, like many of his colleagues, was only too keen to obtain human remains for further research at home. In the absence of sufficient archival information, we cannot be sure whether he obtained the skulls from the colonial government (as he stated) or collected them from open veld himself. In either scenario, however, the question has to be raised whether the acquisition of cranial remains of at least 27 individuals took place in an ethical context, or not. Answering that question, preferably in a dialogue between Namibia and Austria, would lay the basis for deciding on repatriation. Consultation with Namibian partners is envisaged for the future.

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References

Behrensmeyer, A.K. (1978): Taphonomic and Ecologic Information from Bone Weathering. – Paleobiology, **4**/2: 150–162.

Berner, M., Hoffmann, A. & Lange, B. (2011): Sensible Sammlungen, Aus dem anthropologischen Depot. – 279 pp., Hamburg (Philo Fine Arts/Runge).

Bley, H. (1996): Namibia under German Rule. – 344 pp., Hamburg & Windhoek (LIT).

Boocock, P., Roberts, C.A. & Manchester, K. (1995): Maxillary sinusitis in Medieval Chichester, England. – American Journal of Physical Anthropology, **98**/4: 483–495. https://doi.org/10.1002/ajpa.1330980408

Buikstra, J.E. (2019): Ortner's Identification of Pathological Conditions in Human Skeletal Remains. Third Edition. – 858 pp., San Diego, CA (Academic Press).

Buikstra, J.E. & Ubelaker, D.H. (1994): Standards for Data Collection from Human Skeletal Remains: Proceedings of a Seminar at the Field Museum of Natural History. Spi Edition. – 272 pp., Fayetteville (Arkansas Archeological Survey).

Clarence-Smith, W.G. & Moorsom, R. (1977): Underdevelopment and class formation in Ovamboland, 1844–1917. – In: Palmer, R. & Parsons, N. (eds): The roots of rural poverty in central and southern Africa. – pp. 96–112, Berkely (University of California Press).

Davies-Barrett, A.M., Antoine, D. & Roberts, C.A. (2019): Inflammatory periosteal reaction on ribs associated with lower respiratory tract disease: A method for recording prevalence from sites with differing preservation. – American Journal of Physical Anthropology, **168**: 530–542. https://doi.org/10.1002/ajpa.23769

DiGangi, E.A. & Sirianni, J.E. (2017): Maxillary Sinus Infection in a 19th-Century Almshouse Skeletal Sample. – International Journal of Osteoarchaeology, **27**/2: 155–166. https://doi.org/10.1002/oa.2526

Drechsler, H. (1980): Let us die fighting: the struggle of the Herero and Nama against German imperialism (1884–1915). – 287 pp., London (Zed Press).

Eggers, S., Herewini, T.H., Mamaku, T.A., Schattke, C., Buttinger, K., Gorab, M.E. & Berner, M. (2021): Māori and Moriori Human Remains in the Natural History Museum in Vienna: Exhumed, Shipped, Exchanged and Inventoried. – In: Schölberger, P. (ed): Das Museum im kolonialen Kontext: Annäherungen aus Österreich. – pp. 281–303, Wien (Czernin-Verlag).

Ferembach, D., Schwidetzky, I. & Stloukal, M. (1979): Empfehlungen für die Alters- und Geschlechtsdiagnose am Skelett. – Homo, **30**: 1–32.

Fforde, C., McKeown, C.T. & Keeler, H. (2020): The Routledge Companion to Indigenous Repatriation: Return, Reconcile, Renew. First Edition. – 1018 pp., Abingdon, Oxon (Routledge).

Förster, L. (2013): "You are giving us the skulls – where is the flesh?" Die Rückkehr der namibischen Human Remains. – In: Stoecker, H., Schnalke, T. & Winkelmann, A. (eds): Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen. – pp. 419–446, Berlin (Ch. Links Verlag).

Förster, L., Henrichsen, D., Stoecker, H. & Axasi╪Eichab, H. (2018): Re-individualising human remains from Namibia: Colonialism, grave robbery and intellectual history. – Human Remains and Violence: An Interdisciplinary Journal, **4**/2: 45–66. https://doi.org/10.7227/HRV.4.2.4

Fuchs, B. (2003): "Rasse", "Volk", "Geschlecht": Anthropologische Diskurse in Österreich 1850–1960. – 335 pp., Frankfurt (Campus Verlag).

Gewald, J.-B. (2003): Near Death in the Streets of Karibib: Famine, Migrant Labour and the Coming of Ovambo to Central Namibia. – The Journal of African History, **44**/2: 211–239.

Hartmann, W., Silvester, J. & Hayes, P. (1998): The Colonising Camera: Photographs in the Making of Namibian History. – 220 pp., Cape Town, Athens (University of Cape Town Press, Ohio University Press).

Hayes, P. (1993): Order out of chaos: Mandume ya Ndemufayo and oral history. – Journal of Southern African Studies, **19**/1: 89–113. https://doi.org/10.1080/03057079308708349

Hayes, P. (1996): "Cocky" Hahn and the "Black Venus": The Making of a Native Commissioner in South West Africa, 1915–46. – Gender & History, **8**/3: 364–392. https://doi.org/10.1111/j.1468-0424.1996.tb00063.x

Hayes, P. (1997): South Africa doing African history: "Bone narratives" from Namibia, 1915–1920s. – In: McGrath, S., Jedrej, C., King, K. & Thompson, J. (eds): Rethinking African History. – pp. 117–155, Edinburgh (Centre for African Studies).

Hayes, P. (1998): The "Famine of the Dams": Gender, Labour and Politics in Colonial Ovamboland, 1929–1930. In: Hayes, P., Silvester, J., Wallace, M. & Hartmann, W. (eds): Namibia under South African Rule: Mobility and Containment, 1915–1946. – pp. 117–155, Oxford, Windhoek, Athens (James Currey, Out of Africa, Ohio University Press).

Hillebrecht, W. (2013) Probleme der archivalischen Überlieferung – Lücken, Indizien und Rekonstruktionen. – In: Stoecker, H. Schnalke, T. & Winkelmann, A. (eds): Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen. – pp. 279–289, Berlin (Ch. Links Verlag).

Hinz, M.O. & Namwoonde, N.E. (2010): Customary law ascertained. – 566 pp., Windhoek, Namibia (Namibia Scientific Society).

Hoffmann, A. (2020): Kolonialgeschichte hören. Das Echo gewaltsamer Wissensproduktion in historischen Tondokumenten aus dem südlichen Afrika. – 566 pp., Wien, Berlin (Mandelbaum).

Klales, A.R. (2020): Sex Estimation of the Human Skeleton: History, Methods, and Emerging Techniques. – 352 pp., San Diego (Academic Press).

Kössler, R. (2018): Imperial skulduggery, science and the issue of provenance and restitution: The fate of Namibian skulls in the Alexander Ecker Collection in Freiburg. – Human Remains and Violence: An Interdisciplinary Journal, **4**/2: 27–44.

L'Ange, G. (1991): Urgent imperial service: South African forces in German South West Africa, 1914–1915. First Edition. – 352 pp., Rivonia (Ashanti Pub).

Lebzelter, S. (2003): Die Afrikareise des Viktor Lebzelter 1926–1928: Aufarbeitung und Darstellung der Reise Dr. Viktor Lebzelters von 1926–1928 anhand des Archivnachlasses aus Privatbesitz. – Unpublished Diploma thesis, 335 pp., Vienna (University Vienna).

Lebzelter, S. (2005): Die Afrikareise des Viktor Lebzelter 1926–1928. First Edition. – 284 pp., Wien (Facultas).

Lebzelter, V. (1928): Bericht über eine Studien- und Forschungsreise nach Südafrika. – Anthropologischer Anzeiger, **5**/4: 360–362.

Lebzelter, V. (1929): Zusammenfassender Bericht über meine Reisen und Forschungen in Südafrika 1926/28. – Anthropos, **24**, 231–239.

Lebzelter, V. (1930): Die Vorgeschichte von Süd- und Südwestafrika. Wissenschaftliche Ergebnisse einer Forschungsreise nach Süd- und Südwestafrika in den Jahren 1926–1928. – 220 pp., Leipzig (Hiersemann).

Lebzelter, V. (1934): Eingeborenenkulturen in Südwest- und Südwestafrika. Wissenschaftliche Ergebnisse einer Forschungsreise nach Süd- und Südwestafrika in den Jahren 1926–1928. – 306 pp., Leipzig (Hiersemann).

Lebzelter, V. & Schmidt, P.W. (1926): Eine Expedition zur umfassenden Erforschung der Buschmänner in Südafrika. – Anthropos, **21**/5/6: 952–958.

Le Gall, Y. & Mboro, M.S. (2019): Remembering the Dismembered. African Human Remains and Memory Cultures in and after Repatriation. – PhD Thesis, 359 pp., Potsdam (University of Potsdam).

Legassick, M. & Rassool, C. (2015): Skeletons in the cupboard: South African museums and the trade in human remains, 1907–1917. Second Edition. – 114 pp., Cape Town (South African Museum).

Lewis, M.E. (2004): Endocranial lesions in non-adult skeletons: understanding their aetiology. – International Journal of Osteoarchaeology, **14**/2: 82–97. https://doi.org/10.1002/oa.713

Marchand, S. (2003): Priests among the Pygmies: Wilhelm Schmidt and the Counter-Reformation in Austrian Ethnology. – In: Glenn Penny, H. & Bunzl, M. (eds): Wordly Provincialism: German Anthropology in the Age of Empire. – pp. 283–316, Ann Arbor (Worldly Provincialism).

McKeowan, T. (2020): Indigenous Repatriation: The Rise of the Global Legal Movement. – In Fforde, C., McKeown, C.T. & Keeler, H. (eds): The Routledge Companion to Indigenous Repatriation: Return, Reconcile, Renew. 1. Edition. – pp. 23–43, Abingdon, Oxon (Routledge).

McKittrick, M. (2002): To Dwell Secure: Generation, Christianity, and Colonialism in Ovamboland. – 320 pp., Portsmouth, NH (Heinemann Educ Books).

McKittrick, M. (2003): Capricious Tyrants and Persecuted Subjects: Reading between the Lines of Missionary Records in Precolonial Northern Namibia. – In: Falola, T. & Jennings, Ch. (eds): Sources and Methods in African History: Spoken Written Unearthed. – pp. 219–236, Rochester (University of Rochester Press).

Merrett, D.C. & Pfeiffer, S. (2000): Maxillary sinusitis as an indicator of respiratory health in past populations. – American Journal of Physical Anthropology, **111**/3: 301–318. https://doi.org/10.1002/(SICI)1096-8644(200003)111:3<301::AID-AJPA2>3.0.CO;2-0

Miescher, G. (2012): Facing Barbarians: A Narrative of Spatial Segregation in Colonial Namibia. – Journal of Southern African Studies, **38**/4: 769–786.

Miescher, G. (2013): Die rote Linie: die Geschichte der Veterinär- und Siedlungsgrenze in Namibia (1890er bis 1960er Jahre). – 378 pp., Basel (Basler Afrika Bibliographien).

Miller, G.J. (1975): A Study of Cuts, Grooves, and Other Marks on Recent and Fossil Bone: II Weathering Cracks, Fractures, Splinters, and Other Similar Natural Phenomena. – In: Swanson, E. (ed.): Lithic Technology. – pp. 211–226, Paris (Mouton Publishers).

Nankela, A.M. & Silvester, J. (2021): A Namibian Experience: The Contentious Politics of Repatriation of Human Remains and Sacred Objects. – In: German Museums Association (ed.): Care of Human Remains in Museums and Collections. – pp. 129–137, Berlin (German Museums Assosication).

Ortner, D.J. (2003): Identification of Pathological Conditions in Human Skeletal Remains. Second Edition. – 664 pp., San Diego, CA (Academic Press).

Österreichisches Biographisches Lexikon (1972): Österreichisches Biographisches Lexikon 1815–1950, Band V. – 448 pp., Wien (Verlag der Österreichischen Akademie der Wissenschaften).

Pacher, H.-M. (1962): Anthropologische Untersuchungen an den Skeletten der Rudolf Pöch'schen Buschmannsammlung. (Pöchs Nachlass A, 12). – 12 pp., Wien (Böhlau).

Pany-Kucera, D., Berner, M., Reschreiter, H., Kern, A. & Kowarik, K. (2018): Chronische Entzündungen der Nasennebenhöhlen im eisenzeitlichen Hallstatt. – In: Drauschke, J., Kislinger, E., Kühtreiber, K., Kühtreiber, T., Scharrer-Liška, G. & Vida, T (eds): Lebenswelten zwischen Archäologie und Geschichte. (Festschrift für Falko Daim zu seinem 65. Geburtstag, Monographien des Römisch-Germanischen Zentralmuseums, 150). – pp. 985–995, Mainz (Römisch Germanisches Zentral Museum).

Pawlowsky, V. (2005): Quelle aus vielen Stücken: Die Korrespondenz der Anthropologischen Abteilung des Wiener Naturhistorischen Museums bis 1938. – In: Gabriel, H.E. & Neugebauer, W. (eds): Vorreiter der Vernichtung? Eugenik, Rassenhygiene und Euthanasie in der österreichischen Diskussion vor 1938. – pp. 139–165, Wien, Köln, Weimar (Bohlau).

Pietschmann, V. (1940): Führer durch die Sonderschau „Ostmarkdeutsche als Forscher und Sammler in unseren Kolonien": Ein Anteil der Ostmark an der Erforschung und Erschließung der deutschen Kolonialgebiete; Auf Grund der Einzelbeiträge der Sachbearbeiter zusammengestellt. – 31 pp., Wien (Waldheim-Eberle).

Rassool, C. (2020): Restitution ist für uns Traumabewältigung. Plädoyer für eine post-koloniale Wissenschaftsethik. – INDABA **105**/20: 10–13.

Roberts, C.A. (2007): A bioarcheological study of maxillary sinusitis. – American Journal of Physical Anthropology, **133**/2: 792–807. https://doi.org/10.1002/ajpa.20601

Sarr, F. & Savoy, B. (2018): Rapport N°2018-26: "Rapport sur la restitution du patrimoine culturel africain. Vers une nouvelle éthique relationnelle". – 232 pp., Paris (Ministère de la Culture). http://restitutionreport2018.com/sarr_savoy_fr.pdf

Sarreiter, R. (2019): The Trace of Stones: Relational Lives of Stone Tools between South Africa and Europe. – Geschichte und Gesellschaft, **45**/3: 382–403.

Sauer, W. (2008): Österreich und Namibia. Ein schwieriges Verhältnis im langen 20. Jahrhundert – In: Sauer, W. (ed.): Wien – Windhoek retour. 150 Jahre Beziehungen zwischen Österreich und Namibia. – 61 pp., Wien (SADOCC).

Sauer, W. (2012): Die Geschichte von Klaas und Trooi Pienaar. – INDABA, **74**/12: 3–8.

Savoy, B. (2021): Afrikas Kampf um seine Kunst: Geschichte einer postkolonialen Niederlage. Second Edition. – 256 pp., München (C.H. Beck).

Schasiepen, H.S.C. (2021): Southern African Human Remains as Property: Physical Anthropology and the Production of Racial Capital in Austria. – PhD Thesis, 316 pp., Cape Town (University of the Western Cape).

Schölnberger, P. (2021): Das Museum im kolonialen Kontext. – 432 pp., Wien (Czernin-Verlag).

Schultz, M. (1993): Spuren unspezifischer Entzündungen an prähistorischen und historischen Schädeln: ein Beitrag zur Paläopathologie = Vesitges of non-specific inflammations in prehistoric and historic skulls: a contribution to palaeopathology. – 84 pp., Aesch, Basel (Anthropologisches Forschungsinstitut, Anthropologische Gesellschaft in Basel).

Schultz, M. (2001): Paleohistopathology of bone: A new approach to the study of ancient diseases. – American Journal of Physical Anthropology, **116**/S33: 106–147. https://doi.org/10.1002/ajpa.10024

Schwarz, E.H.L. (1920): The Kalahari or Thirstland redemption. – 163 pp., Cape Town, Oxford (T.M. Miller & B.H. Blackwell).

Shigwedha, V.A. (2018): The homecoming of Ovaherero and Nama skulls: Overriding politics and injustices. – Human Remains and Violence: An Interdisciplinary Journal, **4**/2: 67–89. https://doi.org/10.7227/HRV.4.2.5

Silvester, J., Wallace, M. & Hayes, P. (1988): Trees Never Meet. Mobility & Containment: An Overview 1915–1946. – In: Hayes, P., Silvester, J., Wallace, M. & Hartmann, W. (eds): Namibia under South African Rule: Mobility and Containment, 1915–1946. – pp. 3–48, Oxford, Windhoek, Athens (James Currey, Out of Africa, Ohio University Press).

Steckel, R.H., Larsen, C.S., Roberts, C.A. & Baten, J. (2018): The Backbone of Europe: Health, Diet, Work and Violence over Two Millennia. – 476 pp., Cambridge (Cambridge University Press). https://doi.org/10.1017/9781108379830

Stoecker, H. & Winkelmann, A. (2018): Skulls and skeletons from Namibia in Berlin: Results of the Charité Human Remains Project. – Human Remains and Violence: An Interdisciplinary Journal, **4**/2: 5–26. https://doi.org/10.7227/HRV.4.2.2

Stoecker, H., Schnalke, T. & Winkelmann, A. (2013): Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen. First Edition. – 528 pp., Berlin (Ch. Links Verlag).

Strachan, H. (2004): The First World War in Africa. First Edition. – 234 pp., Oxford, New York (Oxford University Press).

Strommer, M.A. (2012): Der Missionar als Linguist: der Wiener Johannes Rath (1816–1903) im Dienst der Rheinischen Missionsgesellschaft bei den Herero. – Unpublished Diploma thesis, 153 pp., Vienna (University of Vienna).

Szabo, A. (2007): László Magyar. Mit „falscher" Nationalität zur „falschen" Zeit in Afrika. – In: Sauer, W. (ed.): k. u. k. kolonial: Habsburgermonarchie und europäische Herrschaft in Afrika. – pp. 127–161, Wien (Böhlau).

Szilvássy, S. (1978): Anthropologie. Entwicklung des Menschen. Rassen des Menschen. Führer durch die Anthropologische Schausammlung. – 150 pp., Wien (Verlag des Naturhistorischen Museums).

Teschler-Nicola, M. (2013): Das forMuse-Projekt und die Beforschung und Restitution überseeischer menschlicher Skelettreste in Wiener Sammlungen. – In: Stoecker, H., Schnalke, T. & Winkelmann, A. (eds): Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen. – pp. 259–278, Berlin (Ch. Links Verlag).

Vanin, S. & Huchet, J.-B. (2017): Forensic Entomology and Funerary Archaeoentomology. – In: Schotsmans, E., Marquez-Grant, N. & Forbes, S. (eds): Taphonomy of Human Remains: Forensic Analysis of the Dead and the Depositional Environment. – pp. 167–186, Chichester (Wiley-Blackwell). https://doi.org/10.1002/9781118953358

Wallace, M. (2011): History of Namibia: From the Beginning to 1990. Illustrated Edition. – 451 pp., New York (Oxford University Press).

Wanless, A. (2010): The Fourie collection of Khoisan ethnographica: forming an archive. – Social Dynamics, **36**/1: 24–37. https://doi.org/10.1080/02533950903561197

Wegmann, H. (2013): Die Freiburger Alexander-Ecker-Sammlung, koloniales Schädelsammeln und der aktuelle Rückgabeprozess nach Namibia. – In: Stoecker, H., Schnalke, T. & Winkelmann, A. (eds): Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen. – pp. 392–418, Berlin (Ch. Links Verlag).

Williams, F.-N. (1991): Precolonial communities of southwestern Africa: a history of Owambo kingdoms, 1600–1920. – 204 pp., Windhoek (National Archives of Namibia).

Zimmerer, J. (2004): Deutsche Herrschaft über Afrikaner: Staatlicher Machtanspruch und Wirklichkeit im kolonialen Namibia. Third Edition. – 344 pp., Münster (LIT).

Zimmerer, J. & Zeller, J. (2003): Völkermord in Deutsch-Südwestafrika. Der Kolonialkrieg 1904–1908 in Namibia und seine Folgen. Second Edition. – 280 pp., Berlin (Ch. Links Verlag).

Zimmerman, A. (2001): Anthropology and Antihumanism in Imperial Germany. Illustrated Edition. – 364 pp., Chicago (University of Chicago Press).

Internet sources

Oppenauer, I. (2015): Ausstellungen und Tagungen mit kolonialem Hintergrund in Wien 1939/1940. – https://homepage.univie.ac.at/walter.sauer/Afrikanisches_Oesterreich2-Dateien/Oppenauer_Kolonialausstellung_2015_korr.pdf. Accessed 2017-01

Silvester, J. (2017): Report on the Human Remains Management and Repatriation Workshop, Cape Town, 13th–14th February, 2017. https://icme.mini.icom.museum/wp-content/uploads/sites/16/2019/01/Report_on_the_Cape_Town_Workshop_02.17.pdf. Accessed 2022-02