Martin Kalb

On a slightly windy February day, perfect ‘Kaiser emperor weather’, 1 according to one newspaper, the pier in Swakopmund was packed with dignitaries, workers, and curious onlookers [Image 1]. It was the opening ceremony of the recently completed Mole, a roughly 365-metre-long pier that reached into the dangerous Atlantic waters off the coast of German Southwest Africa. Its construction had taken three and a half years. Now, on 12 February 1903, it was time to celebrate. Festivities throughout the day had brought all kinds of visitors to the small coastal town, including officials from the German Consulate in Cape Town; they were accompanied by about twelve representatives primarily tied to business and agriculture. 2 The responsible hydraulics engineering surveyor Hermann Friedrich Ortloff, his deputy, and countless workers – segregated based on status and race – crowded the new harbour to watch various ceremonies. 3 The mood on the pier was elated, celebratory, optimistic, even enthusiastic, and officials seemed confident that this would finally bring the upturn for the German colony. After all, this harbour, together with the recent opening of the railroad connecting Swakopmund to the interior, was ‘of great importance for the further development of the protectorate’, 4 as one newspaper noted. Another publication commented on the ambitions of the young German empire, and that Germany now ‘set foot into the ocean’ in this region. 5 Until this moment German colonialists had complained about the fees and restrictions at the nearby British harbour of Walvis Bay. 6 Now they had their own harbour, their own Einfallstor entry point into the colony, 7 conquered from nature in a long and hard fight, as one governor would recall in his memoirs several years later. 8 The Swakopmund newspaper Deutsch-Südwestafrikanische Zeitung was equally proud with the

8 Theodor Leutwein, Elf Jahre Gouverneur in Deutsch-Südwest Afrika (Berlin: Mittler & Sohn, 1906), 140.
outcome of the communal ‘fight against the sea.’

Little did they know that nature in Southwest Africa would repeatedly challenge such imperial infrastructures in the age of hydrology, and with that the young empire’s ambitions in the region.

Stories of conquest can tell us much about widespread German colonial fantasies, the eagerness of that young empire, and the role of nature within colonial Southwest Africa; they also outline efforts to connect to transoceanic routes and globalized networks based on the newest technologies within an imperial economy. Originally established in 1884 as Germany’s first colony, Southwest Africa played an important role in Germany’s overall efforts to gain its ‘very own place in the sun’ – as famously stated by state secretary of foreign affairs, Bernhard von Bülow. Although ‘German colonialism […] was part and parcel of the larger European colonial project’, to follow historian Sebastian Conrad, the lack of remaining spoils given Germany’s delayed unification brought several challenges. Once committing in some way to the colonial project numerous players tried to shape German objectives from different vantage points. For Southwest Africa, German colonialists envisioned a future living space and settler colony meant for an overcrowded homeland.

Efforts to settle farmers were meant to create a profitable cattle industry, maybe together with other agricultural productions and the exploitation of potential raw materials. However, Southwest Africa, a strip of land seemingly left over at the end of many scrambles for Africa, incorporated largely arid landscapes stretched between British South Africa, the Kalahari Desert, Portuguese Angola, and the Atlantic Ocean. It was, as overconfident German newcomers repeatedly observed, a wasteland in dire need of German ingenuity and work ethic. According to one popular description, ‘the blacks […] simply have not built houses and have not dug wells.’ In that sense, and in line with other European colonising

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11. Sebastian Conrad, *German Colonialism: A Short History* (Cambridge: Cambridge University Press, 2012), 3. Colonial powers rarely cooperated, and some scholars have pointed to unique elements tied to German colonialism – tied to racial segregation, for example.
12. For conversations tied to the concept of living space [*Lebensraum*] and German colonialism in Southwest Africa see, for instance: Volker Langbehn and Mohammad Salama, eds., *German Colonialism: Race, the Holocaust, and Postwar Germany* (New York: Columbia University Press, 2011); David Olusoga and Caspar Erichsen, *The Kaiser’s Holocaust: Germany’s Forgotten Genocide and the Colonial Roots of Nazism* (London: Faber & Faber, 2011).
missions, deserts could bloom under German supervision once there was safe year-round access.

Yet the dangerous waters of the Atlantic Ocean, a lack of safe harbours, and the natural barriers of the Namib Desert made accessibility a central problem for German colonialists. Fortunately, German businessman Adolf Lüderitz had claimed one natural harbour, Angra Pequena, later named Lüderitzbucht, in 1884. Its Robertshafen Robert Harbour, ‘a wonderful natural harbour’, as one German sailor noted, provided relative safety from dangerous ocean currents. It still lacked drinking water and access to the interior given the encroaching dunes of the Namib Desert. Moreover, as an experienced seafaring power, the British had taken control of the only other natural harbour, Walvis Bay. Its natural bay had served whalers since the late eighteenth century. At one point the Dutch took control, and once whaling grounds shifted elsewhere the location increasingly turned into a trade post. The British officially incorporated Walvis Bay into their empire in March 1878, which further limited possibilities for the Germans. As a result, German colonialists and engineers felt they needed to put their technical expertise, work ethic, and supposed superiority to work in their attempts to create their own harbour and access point into central Namibia, the coastal town of Swakopmund. Along the way, they fought against numerous geographic, environmental, and ecological forces. In fact, and as I argue, water, sand, and a mollusc were amongst the most harmful adversaries of German colonialists in Swakopmund. Here, the German belief in ingenuity and superiority met its match.

This case study focusing on Swakopmund takes discussions of the so-called age of hydrology, and the repeated omission of non-human actors by supposed experts, into the German empire. Nature, defined as non-human actors (animals and plants) and broader environmental factors (including water and climate), has seen a decent amount of attention from those focusing on the German empire more broadly and German Southwest Africa

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15 Gustav Buß, Der Globetrotter: Erinnerung eines Ruhelosen (Preetz in Holstein), 27, accessible at the Schleswig-Holsteinische Landesbibliothek Kiel. Even by the early 1900s the difference between Lüderitzbucht and Swakopmund when it came to the unloading process was like ‘day and night.’ Ibid.
16 Felix Schürmann, Der graue Unterstrom: Walfänger und Küstengesellschaften an den tiefen Stränden Afrikas (1770-1920) (Frankfurt am Main: Campus, 2017), 139
more specifically. Discussions of giving more agency to nature are also long-standing within environmental history. My study builds on these efforts. More specifically, I refer to networks, webs, interactions, hybrid agencies, and connections to illustrate the role of nature. To follow political theorist and historian Timothy Mitchell, this ‘does not mean introducing a limitless number of actors and networks, all of which are somehow of equal significance and power. Rather, it means making this issue of power and agency a question, instead of an answer known in advance. It means acknowledging something of the unresolvable tension, the inseparable mixture, the impossible multiplicity, out of which intention and expertise must emerge. It requires acknowledging that human agency, like capital, is a technical body, is something made.’

German historian Bernhard Gissibl noted in a similar context, ‘Animal action and behaviour influenced and determined what humans did (and vice versa). In that relational processual, and compounded sense, animals did have agency.’ In my view, and in the context of this case study, water, sand, and molluscs – all of which are actors rarely considered within history – directly challenged experts in the ‘golden age of science’.

Scholars have long focused on this period in history. The long nineteenth century was the age of technology and progress as ‘mastery over nature was supposed to mark the moral advance of humankind’. More specifically, and given my focus on the age of hydrology, it was the time of experts and engineers as well as the professionalization of hydrology. In fact,


24 Ibid.
in nineteenth century Europe ‘hydraulic engineering became a central government responsibility, instead of being left to provincial authorities and private individuals,’

to follow historian Jürgen Osterhammel and others. According to historian David Blackbourn’s excellent volume _The Conquest of Nature: Water, Landscape, and the Making of Modern Germany_ (2006), ‘nature was an adversary to be manacled, tamed, subdued, conquered, and so on through a dozen of variations.’

Blackbourn goes on to describe massive efforts to drain swamps and straighten rivers as part of the making of Modern Germany. Historian Mark Cioc focused more specifically on efforts along the Rhine River and outlines how engineers rarely anticipated ‘the full consequences of their manipulative actions.’ Both ultimately capture the golden age of the sciences, engineering, and technology, and the belief in progress while pointing to ‘inadequate understandings of ecology and hydrology alike.’

My comments build on their approach yet incorporate German colonial dynamics, and are thus in line with discussions around ‘imperial infrastructures’ put forward by scholars like Dirk van der Laan. Global connections and networks matter given the in-between role of numerous players. In fact, experts, expertise, and knowledge moved back and forth between Germany, Southwest Africa, neighbouring South Africa, and other powers. Underlying notions of hubris, anxieties of empire, and colonial fantasies are key in this context, and a rich historiography provides lots of avenues to contextualize German ambitions.

In the end, I ultimately hope to capture some of those German colonial fantasies in the age of hydrology, add to discussions tied to German ambitions in that region more broadly, and bring nature into conversations around Southwest Africa.

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I looked within the colonial archives and consulted less traditional documentation when trying to find the voices of nature – and experts fighting against it. Countless accounts by German explorers, missionaries, administrators, soldiers, colonialists, and settlers help tell different stories. I exploit these descriptions based on their references to nature. For instance, many German newcomers unfavourably compared existing Southwest African landscapes to their German Heimat homeland. Aware of this colonial gaze and frame of reference, I am interested in underlying attempts to construct heroic narratives of frontier pioneers in a war against nature. Governmental reports accessed in archives in Germany, Great Britain, and Namibia, as well as newspapers, provided additional insights into such frameworks. Similarly, my use of technological writings by experts speaks to their ambitions, beliefs, fantasies, and even hubris when dealing with namely colonial environmental settings. Apart from trying to balance these sources with the voices of local African populations, my emphasis on the role of nature as ‘an active, shaping force in the past’ further helps expose the motivating colonial narratives in many instances. I thus often add forgotten or dismissed ecological processes and environmental factors like the importance of erosion, aridity or currents to existing descriptions – so less widely included voices when it comes to these discussions. Connections between water and sand – or water, the scarcity of wood, and molluscs – played important roles, and repeatedly determined how battles against nature played out in a colonial setting like Swakopmund.

Organized thematically, I also aimed to follow a broadly chronological setup even though some dynamics slightly overlap. In part I, water – its scarcity tied to climate and other environmental factors, as well as its dangers tied to winds and currents – takes centre stage given that it greatly diminished the accessibility of and possibilities tied to German Southwest Africa. In part II, sand plays a key role as I discuss how it made the Mole virtually

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32 Bundesarchiv in Berlin-Lichterfelde and Koblenz (BArch) and The National Archives of the UK (TNA). Other primary source materials, including newspapers and monographs, have been accessed at the National Archives and Library in Windhoek, the Staatsbibliothek in Berlin, the Universitätsbibliothek in Frankfurt, the Universitätsbibliothek in Bayreuth, and the Landesbibliothek in Kiel; Interlibrary Loan and online databases have also been helpful. I want to thank all archivists and librarians for their help and guidance when accessing and working with these materials.

33 Main newspapers include: Deutsch-Südwestafrikanische Zeitung; Deutsches Kolonialblatt; Deutsche Kolonialzeitung; Windhuker Nachrichten/ Südwestbote; Südwest.

34 Examples for such publications include journals like Zeitung des Vereins Deutscher Eisenbahn-Verwaltung and Zeitschrift für Bauwesen.


36 Steinberg, ‘Down to Earth’, 803.
useless, the first massive German investment in Swakopmund – right at a time when the local population revolted against German colonial rule. Part III then gives the naval woodworm (*teredo navalis*) some agency, a mollusc that forced German colonialists to ultimately abandon yet another site in Swakopmund. The incorporating of non-human nature into the web of factors defining German colonialism in Swakopmund ultimately showcases the complexity of events and the role of environmental factors in challenging German colonial fantasies.

**Part I: Water**

Two hydrologic threats indicate that water played a key role for German colonialism in Southwest Africa, especially in the area that would become the town of Swakopmund. First, there was not enough drinking water around. The environment of Southwest Africa is generally arid and dry, with little to no rainfall. Desert landscapes, most notably the Namib Desert, dominate the coastal region around Swakopmund. Water is scarce and runs off quickly if rain falls. For instance, the Swakop River only holds water for about fourteen days a year, rapidly flushing downstream into the ocean during those days. The rest of the time drinking water must be dug up in the river bed given that it evaporates quickly. Such aspects made life difficult for humans in this region, and local groups had rarely migrated to this area – at least until the arrival of whalers. Then, by the nineteenth century, the Aonin people showed up more frequently along the coastline, to trade. Secondly, the dangerous Atlantic Ocean waters dominated the area. The ocean should have made access into Southwest Africa easy. Yet the opposite was true given precarious currents and a lack of adequate protection along Namibia’s coastline of roughly 1,570 km. According to a recent geographic study, ‘Namibia is located within a swell wave environment, and experiences near constant, and often large, waves coming from the SW which have travelled huge distances across the Atlantic.’ ‘The Benguela Current, a strong surface current which comes from the Southern Atlantic and brings cold waters up the coast to around the mouth of the Kunene River.’

There were only two natural harbours that provided some protection against those forces of

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38 Schürmann, *Der graue Unterstrom*, 120.
nature: Angra Pequena, in the southern part, was claimed by German businessman Adolf Lüderitz and defined as the ‘arguably best harbour in all of the southern west coast of Africa.’\(^{41}\) The British had already claimed the only other natural harbour, Walvis Bay, and it would remain an enclave within the German territory throughout this period. In other areas, strong currents, winds, breakwaters, and cliffs simply made waters much too dangerous.

Delayed German unification in 1871 soon juxtaposed an ambitious young empire against such environmental factors and experienced British colonialists nearby. The British had recognized the importance of coastal waters and potential access into central Namibia early on. As a result, they had officially annexed Walvis Bay 12 March 1878. Though they had little interest in developing the area, Walvis Bay was by far the best harbour in central Southwest Africa, a fact that even the Germans occasionally admitted. In 1890, for instance, the newspaper *Deutsches Kolonialblatt* noted, ‘Walvis Bay marks the beginning for the section [of Southwest Africa] with the best and most potential in our protectorate.’\(^{42}\) Its natural bay provided relatively easy access onto land and to the central plateau, the area with the best land for cattle farming and possibly agriculture. Early German colonialists thus relied on this ‘key’ into Southwest Africa when unloading their cargo; German officials also repeatedly tried to acquire it.\(^{43}\) However, Britain was unwilling to surrender Walvis Bay. According one high-ranking British administrator in Cape Town in 1891, ‘My belief is that the time is coming when Germany will recognise that the interior [of Southwest Africa] without the port [of Walvis Bay] is of no value. That the two should belong to one Power is manifest; and that the Cape Colony will never surrender Walwich Bay is absolutely certain.’\(^{44}\) The local Magistrate in Walvis Bay, John James Cleverly, agreed, well aware ‘of the value of Walfisch Bay to the [Cape] Colony’; he was also increasingly assertive that there was ‘no intention whatever of relinquishing possession of Walfisch Bay.’\(^{45}\) German efforts to gain the harbour ultimately failed, and German newcomers found themselves at the mercy of the British when landing in German Southwest Africa.

Unhappy about such a dependency, and given other local challenges, an eager

\(^{41}\) *Deutsches Kolonialblatt*, ‘Die Häfen der Südwestafrikanischen Schutzgebiete’, 1 Jun. 1890, 80.

\(^{42}\) *Deutsches Kolonialblatt*, ‘Die Häfen der Südwestafrikanischen Schutzgebiete’, 1 Jun. 1890, 79.

\(^{43}\) German officials hoped that Britain would eventually give up Walvis Bay. In fact, Walvis Bay came up when talking about larger swaps of territories with Great Britain, most notably regarding the Heligoland. See: Jan Rüger, *Heligoland: Britain, Germany, and the Struggle for the North Sea* (Oxford: Oxford University Press, 2017), 80/81.

\(^{44}\) The National Archives of the UK (TNA), CO 879/34/4, African (South), no. 407, ‘Spriggs to Colonial Office’, 22 Jan. 1891.

\(^{45}\) Ibid., ‘Enclosure (Memorandum)’, 6 Jan. 1892; Ibid., ‘State of Affairs’, 31 Oct. 1893. For debates tied to Walvis Bay over the years see also: BArch R 1001/8848 and BArch 1001/8850.
German empire moved towards searching for alternative landing spots. Various missions had surveyed the Atlantic coastline in the past – with little success. Now, officials revisited such efforts and ships soon finished additional surveys along the coastline. The geographical makeup left few options. In 1890, for instance, the German ship Habicht reported, ‘nowhere does the landscape become any better. Everywhere does the gaze meet sand dunes, occasionally broken up by lose piles of sand rocks; there is also no harbour to protect or land ships until Walvis Bay’46 – none for 350 nautical miles. Locations like Cape Frio, Ogden Rocks, and even the previously considered Cape Cross, the report continued, were of little use. British officials in Walvis Bay could barely hide their delight and, at times, speculated on the potential sale of the colony.47 For Germans colonialists, the situation only got more complicated once local African leader Hendrik Witbooi was unwilling to relinquish his power to German rule.48 In fact, the number of his attacks became much more widespread by about 1890. The British tried to stay out of it: they choose neutrality and prohibited the arms trade through Walvis Bay.49 In at least one instance, local British magistrate Cleverly seized German military equipment and cargo, which angered the German colonial troops under Curt von François.50 The issue was eventually resolved to the detriment of Witbooi and his men. Yet the overall situation clearly underscored the value of accessing Southwest Africa, and the need for more German investments.51 New German expeditions thus visited namely Rock Bay again. Yet by 1895 one newspaper summarized that this had been ‘an illusion’: entries into the bay were simply ‘not deep enough’ and there was no drinking water nearby.52 The same applied to Sandwich-Harbour south of Walvis Bay, used earlier as a German landing spot: ‘While the harbour was still considered good and safe in the year 1884’, even by 1888, by 1889 the entry point into the harbour had silted in and shrunk dramatically, according to the newspaper Deutsches Kolonialblatt.53 A lack of drinking water only added to the problems on site.

48 Wallace, A History of Namibia, 104.
51 Chancellor Otto von Bismarck had declared himself ‘weary of colonies’ by 1892; his successor Count Leo von Caprivi had originally agreed. Yet by mid-1892 those in favor of German colonialism ‘had gained the upper hand’, as historian Marion Wallace rightly notes. Wallace, A History of Namibia, 125-126.
52 Südafrikanische Zeitung, 27 Mar. 1895.
Eventually, and speaking to the importance of water, German colonialists chose the area near the mouth of the Swakop River. Most reports and surveys hinted at the potential value of this location. This area had access to good drinking water. A slight gap through the Namib Desert to reach the inland plateau could come in handy when constructing a railroad later on. Plus, according to one report, ‘The breakwaters were not considered too strong [and] it will be possible, to land cargo with breakwater boats.’ Early expeditions had made similar suggestions, even though the location was nowhere near perfect: in 1884, when the German ship Wolf tried to officially claim the area for Germany, ‘The breakwaters off [the coast of] Swakopmund were impassable. The few German colonial inhabitants [living in Walvis Bay] had to return in their own little boats back to Walvis-Bay, and the ship Wolf had to wait for a weakening of the breakwaters.’ Only in the evening was it possible to raise the imperial flag, then without the desired presence of the German inhabitants. Tides and currents thus literally held back and delayed German colonialism from the start.

Early navigation attempts off the coast of Swakopmund turned out to be dangerous. Currents were much too strong, and breakwaters extremely unpredictable. Unable, and partially unwilling, to deal with such challenges and conditions, steamers arriving from Germany soon picked up West African Kru men in Monrovia. These Kru men were experienced and skilled when it came to be navigating similar waters off the coast of West Africa. Off the coast of Swakopmund, they soon steered small landing boats, filled with cargo and passengers, back and forth between steamers and the beach, across at times strong currents and breakwaters. Still, accidents continued to happen. On 24 May 1899, for instance, one newspaper reported that ‘a boat with fifteen men capsized about thirty metres away from the breakwater.’ Three passengers drowned in the ice-cold waters. It even hit supposedly experienced German seamen, like on 4 June 1895. That day, a boat capsized.

German landing official Ludwig Koch had granted its request to help unload the steamer *Carl Woermann* given the men’s experiences with difficult waters. According to a report in the newspaper *Deutsche Kolonialzeitung*, ‘The boat had no issues in its first run to the steamer and back, not even a drop of water. On their second tour, when the boat was only partially loaded with cargo, a wave filled the boat with water from behind. Barrels swam away, as did officer Schlüter along with two seamen. They swam back to the boat […] trying to bring the boat ashore. But they could not grab the straps in time and so the boat came in front of another breaking wave and capsized. Three of them tried to use barrels to swim ashore. Three others stayed on the boat until another wave splashed them off. Just one of them, private Becker, […] was able to swim ashore. All efforts to rescue the people from […], were in vain.’

Seawaters endangered life and limb, and threatened the success of German colonialism in the area.

Eager colonial officials, with the help of numerous experts, soon weighed different options to overcome such dangers, and to make disembarking safer. Did the wind shift the water in certain ways and at certain times? What was the current like in specific sections and areas? What factors had to be considered apart from wind and hidden cliffs? And, what structures would help remedy these issues? Several expert hydrologists, including Theodor Rehbock, chimed in and proposed massive colonial infrastructures – namely concrete Mole piers and other protective walls meant to create a harbour [Image 3]. Those familiar with local circumstances disagreed. In summer 1895, captain J. Heldt of steamer *Jeanette Woermann*, who had navigated the area numerous times, submitted his observations, measurements, and proposal. In his view, a solid concrete Mole structure of around 650 m would require a massive investment well beyond 2 million Mark. Instead, Heldt favoured a much cheaper iron pier. Such installations had been rather successful elsewhere and thus began littering the coast in German West Africa and German East Africa. Nonetheless, and given underlying desires to create a prosperous Swakopmund harbour, experts and officials trumped the captain’s suggestion and decided upon a more expensive Mole structure.

This decision fits into a broader discourse around the conquest of an untamed wilderness. A defining characteristic of the long nineteenth century, engineers massively intervened in nature at the advent of ‘carboniferous capitalism’, as historian Lewis Mumford

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59 *Deutsche Kolonialzeitung*, ‘Kleine Mitteilungen’, 24 Aug. 1895
63 Ibid., 34.
has called the age of fossil fuels.\textsuperscript{64} Germany, according to historian David Blackbourn, experienced its ‘Wonderland of Technology’, which took off in the 1880s.\textsuperscript{65} At that time, descriptions of major dam-building projects resulted in numerous publications by experts and laymen alike – the latter often simply relating their visits to construction sites like the Urfttal Dam in the Eifel Mountains in popular magazines.\textsuperscript{66} Experts on infrastructure projects, on the other hand, chose publication venues like the one of the Association of German Engineers\textsuperscript{67} – or magazines like \textit{Zeitschrift für Bauwesen} or \textit{Zentrale Bauverwaltung}. The eventual construction of the Mole in Swakopmund could thus not only draw on the expertise and experiences of numerous engineers and previous projects; it was also seen as just another episode in the conquest and betterment of nature.

In Swakopmund, the construction of the Mole began with a detailed assessment of the location, including available building materials and anticipated challenges. Hydraulics engineering surveyor Ortloff arrived with other experts and around fifty workers in November 1898.\textsuperscript{68} Well-known naval harbour architect Heinrich Mönch had already briefly visited Swakopmund in December 1896. His reports became the basis for some of Ortloff’s surveys.\textsuperscript{69} Ortloff described his doings himself, noting, ‘Since the beginning of time all of the coastline of our protectorate had little draw for seafarers because it is harsh and inaccessible.’\textsuperscript{70} He again included geographic and environmental challenges of a variety of locations. His scientific approach is clearly skewed by colonialism. In fact, he unjustly questioned the future accessibility of Walvis Bay, points to its lack of drinking water, all to almost naturally restate the supposed benefits of Swakopmund. Later, Ortloff described how the construction of a water system was not only vital for the harbour but also for the local German population: now there are little gardens, and deadly looking places have turned into beauty. His detailed assessment of the surroundings also included references to climate and weather, waves, ocean currents, shifts in sea levels and coastlines, and water depth.\textsuperscript{71} Ortloff clearly believed in the abilities of German engineering and the probable conquest of nature –

\textsuperscript{64} Cioc, \textit{The Rhine}, 15.
\textsuperscript{65} Blackbourn, \textit{The Conquest of Nature}, 189.
\textsuperscript{66} Ibid., 191/192.
\textsuperscript{67} Ibid., 193.
\textsuperscript{70} Ortloff, ‘Der Bau des Hafens Swakopmund’, 346.
\textsuperscript{71} Ibid., 356 and 356-364. In fact, some of his observations later appeared in a comprehensive study tied to climate and other environmental factors. See: Albert Gülland, \textit{Das Klima von Swakopmund} (Berlin: E. S. Mittler & Sohn, 1907), 1.
even if it might be more challenging than in the familiar surroundings of Northern Germany. He did compare his findings regarding the movement of sand along the coast with those of previous assessments by German ships and marine architect Mönch. He ultimately concluded when writing, ‘a stronger movement of sand [along the coast] could not have occurred.’ Preparatory work such began, including the construction of housing for workers, of a narrow-gauge railway to transport rocks from a nearby quarry, and of a water pipeline later used to serve the town.

Descriptions of the actual construction process, which began with the foundation stone ceremony on 2 September 1899, can tell us much about German colonial perceptions and fantasies in the age of hydrology these also showcase underlying pressures to access Southwest Africa. In fact, much of the reporting focused on larger efforts to access German Southwest. The magazine *Zeitung des Vereins Deutscher-Eisenbahnverwaltung*, for example, had commented on the lack of infrastructure in German Southwest Africa in 1892. Overcoming nature was often a key component of such reporting. And when it came to the construction of the Mole, newspapers like the *Deutsch-Südwestafrikanische Zeitung* captured ‘the fight’ against the elements along the coast. Ortloff himself painted the most vivid picture of events. Often published in technical magazines several years later, or part of presentations to captivated audiences in Berlin, Ortloff framed the actual construction of the Mole as a heroic colonial struggle against the undisciplined waters, climate, and people of Southwest Africa.

In those tales Ortloff generally set the stage by outlining his plan; he also repeatedly commented on workers. He had chosen a spot with some solid rocks to build on, and favoured the use of a mixture of concrete, sand, and granite for the Mole’s foundation – the later was accessible in quarries nearby. According to Ortloff, out of 78 German workers some quit right away; others got used to conditions on site only over time. The at one point 197 native workers, on the other hand, to still follow Ortloff, worked hard and behaved well.

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72 In 1895, architect Heinrich Mönch measured only slight sanding for the Mole. BArch, R 1001/1865a, ‘Hafenanlagen in Swakopmund’ (Aufzeichnungen, betreffend die Entstehung und Versandung des Hafens von Swakopmund und die zur Bekämpfung der Versandung getroffenen Maßnahmen).
76 Hermann Friedrich Ortloff, *Landungsverhältnisse an der Küste Deutsch-Südwestafrikas* Vortrag, gehalten am 14. Dezember 1901 (Berlin: Verlag von Dietrich Reimer, 1902). Ortloff was in charge throughout the construction of the Mole though his deputy Laubschat took over during Ortloff’s home leave.
However, they needed strong guidance. It is not quite clear what that entailed – yet given overt racism and the widespread discrimination of local African populations, the mistreatment of workers was likely. According to Ortloff, Herero and Ovambo were among the best workers if ‘treated appropriately.’ He went on describing what that meant: ‘These people had to be treated like children: one must be friendly but just.’ At the same time, few whites worked there, and they mainly ‘operated machinery, maintained railroad tracks, sharpened chisels, and such.’ A good number of white workers came from Cape Town. Ortloff noted that he was much happier with Herero and Ovambo workers than with white South Africans, probably because the former could be forced more directly to complete the work. At a talk in Berlin in December 1901 he simply noted, ‘It was rather difficult to deal with the people.’

Climate and weather was also an issue. The wet and cold climate along the coast brought setbacks and problems throughout, and several workers died due to diseases, especially in the winter months. At the first, the weather had been good, until May, and construction had moved along with few issues. The situation at the construction site then changed dramatically. Ortloff writes, ‘Yet suddenly, at the beginning of June a heavy sea emerged, and it resulted in a massive destruction [of sections of the pier], so that the continuation of the construction had to wait until the end of the year.’ Delays persisted, and ‘an enduring struggle against the stirring ocean’ took place for months. ‘The same struggle continued with shifting luck at the beginning of 1902’, and throughout the year. By August early efforts to use parts of the Mole were successful. At other times, the rough sea destroyed several sections of the Mole, and weeks of work. Yet dedicated to this colonial project, Ortloff was ultimately successful and the Mole was completed by early 1903 – together with a lighthouse, a short train, and a custom house. The inner harbour was about one hectare [Image 4]. He could thereby end his descriptions by reflecting about ‘the unique construction site some thousand kilometres away from the Heimat homeland’, defined by a lack of machinery, a lack of discipline of some workers, and harsh environmental conditions

78 Ortloff, Landungsverhältnisse an der Küste Deutsch-Südwestafrikas, 37.
79 Ibid., 35.
80 Ibid., 37.
81 Ibid., 36.
85 Hafenbautechnische Gesellschaft, ed., Die Deutsche Kolonialhäfen, 58.
– including ‘the not rarely miserable climatic circumstances und the resulting diseases and pandemics.’ For Ortloff, the opening of the Mole in February 1903 [Image 1], postponed at least once, marked a heroic victory of German engineering, ingenuity, and tenacity against many factors.

The investment of about 2.5 million Marks seemed well worth it. In April 1903, one newspaper noted that the completion of the Mole in Swakopmund now organized the landing process ‘in a decent way.’ Others agreed, stating that the unloading at the new Mole went rather smoothly. Similar views dominated discussions even after a massive storm had destroyed parts of its tip, including a small lighthouse, by late May and again in early June. This early moment can tell us much about German dedication: instead of possibly rethinking, or at least re-strengthen, the Mole at this time, German colonial officials simply referenced a similar situation in British South Africa – seemingly to indicate the normality of these losses. Maybe some voices expected future investments to make up for what was lost – though most seemed to feel that it would still function. In that sense, contemporaries kept the spotlight onto German actions and assigned the forces of nature a supporting role while putting themselves on par with British colonial traditions elsewhere. In August, one description proudly, even defiantly, noted, ‘So far landings at the Mole went well even during unfavourable conditions so that it seems reasonable to believe that this structure will be pretty sufficient. Completed observations regarding patters of currents have shown that fears regarding a sanding in of the inner Mole basin are unfounded.’ As it would turn out, such hopes and illusions were short-sighted and misguided.

Part II: Sand

The desert landscapes of Southwest Africa make sand an important factor for any inhabitants, including colonial newcomers. At times characterized as a ‘coastal desert’, the eco-system along the Southwest African coastline is defined by the Namib Desert. Its dunes create a barrier between the Atlantic Ocean and the interior, greatly restricting accessibility.

89 Globus, ’Deutsch-Südwestafrika im Jahre 1903’, 1 Apr. 1904.
91 Deutsche Kolonialzeitung, ‘Rundschau: Von der Mole’, 23 Jul. 1903. Cape Town was the main point of reference for German colonialists in South West Africa.
Inhabitants of coastal settlements like Lüderitzbucht and Walvis Bay often faced great difficulties when trying to connect to the hinterland. In Lüderitzbucht, for instance, constant movement of sand dunes repeatedly challenged efforts to build a railroad inland later on. In Swakopmund, on the other hand, a gap eastward, along the Swakop River bed, had been the basis for the so-called Baiweg, or Bay Way. That route was soon also used by early German settlers traveling inward. An increasing lack of water and grass along the way, the devastating impact of the Rinderpest pandemic, and raids by Hendrik Witbooi eventually resulted in the construction of a railway. Soon railway carts would thus replace oxen wagons. Apart from such challenges, sand was also virtually everywhere in Swakopmund, making up streets and sidewalks, and blowing into homes through every little crack. Clara Brockmann, a German settler, was struck by the presence of this yellowish-brown and gritty substance when visiting Swakopmund: ‘Wherever one looks: desert sand – yellow, hard and burning, piled up in endless dunes. The small gardens, that the inhabitants of Swakopmund have tended to for several years, and of which they are extremely proud, cannot belie the lack of green fields and mountains – although it has to be recognized that the inhabitants have made life comfortable with modest means.’ German newcomers arriving and disembarking in Swakopmund repeatedly commented on the presence of sand and the desert-wasteland that greeted them, partially shocked given some underlying misconceptions of the German colony.

Yet German eagerness, maybe even hubris, made engineers and other experts apparently underestimate the role of sand when constructing the Mole. Shortly after the Mole had opened for business, and the railway was running its course and crossing the Namib Desert, it was sand that disrupted German colonialism. In 1903 and 1904, so more than once that year, heavy rains had resulted in a massive flood of water down the Swakop River. At its mouth, it eventually flushed large amounts of sand into the ocean. Several sketches by captain Connemann in the journal Marine-Rundschau nicely capture the events [Image 5]. In February of that year, the sand was still located near the mouth of the Swakop River. By May, the ocean current had carried it northward near the Mole, where it had assembled on its outside wall. In June, it had begun forming a sandbank at the tip of the Mole before, by July,

94 It linked Windhoek, central Namibia, and Walvis Bay.
96 See, for instance: Gülland, Das Klima von Swakopmund.
it sanded in the protected harbour altogether.\footnote{Marine Rundschau, ‘Meinungsaustausch’, Jun. 1908.} That month the landing process became more and more difficult given that, except during high tide, the inner harbour had become inaccessible.\footnote{Deutsch Südwestafrikanische Zeitung, ‘Aus Swakopmund’, 13 Jul. 1904. See also: Deutsch-Südwestafrikanische Zeitung, ‘Aus Swakopmund’, 6 Jul. 1904.} Still, and as referenced previously, some voices continued to praise the Mole as late as August.\footnote{Archiv für Post- und Telegraphie, ‘Kleine Mitteilungen’, Aug. 1903.} By September 1904, however, a report admitted that the Abkommen breaking off of sand had brought considerable problems: ‘During many days the traffic has to be stopped due to unfavourable [conditions of the] ocean.’\footnote{BArch, R 1001/1865a, ‘Hafenanlagen in Swakopmund’ (Vorschläge zum Ausbau des Hafens). There were no significant changes until Apr. 1903; by 4 May 1904, there was already too much sand, however. Ibid., (Anlage).} The silting in had simply made the bay much too shallow for the unloading process, and soon the Mole could only be used four to five hours a day, at high tide – instead of 12-14 hours.\footnote{BArch, R 1001/165a (Eich, 1904). See also: Deutsch-Südwestafrikanische Zeitung, ‘Aus Swakopmund’, 4 Jan. 1905.} Sand had begun to strangle the Mole, and with that, German colonialism in Southwest Africa.

A commission meant to survey the situation arrived on site in August. The weather was beautiful then, and the commission determined that a power shovel could easily navigate the coastal waters and remove the sand. Logistical issues delayed the arrival of these shovels from Stettin.\footnote{BArch, R 1001/165a (Eich, 1904). See also: Deutsch-Südwestafrikanische Zeitung, ‘Aus Swakopmund’, 4 Jan. 1905.} According to a debate within the German Reichstag parliament, ‘The only bagger that could be considered, was the bagger ‘Nikolaus’ from the Kaiser-Wilhelm Canal. It could not be given up by the canal administration. Due to that the machines had to be newly modified, and newly equipped for the travel oversea to Swakopmund. This took time – months’.\footnote{See: Reichstag 74. Sitzung, 24 Mar. 1906, 2268 (Wislow), accessible at http://www.reichstagsprotokolle.de/Blatt_k11_bsb00002826_00000.html, last accessed 23 July 2017.} Once the power shovel finally arrived on 3 March 1905, it was too late. According to one account, the silting process had simply advanced to such an extent ‘that the loaded [shovelling] vehicles could not cross the breaking sea anymore.’\footnote{BArch, R 1001/1865a, ‘Hafenanlagen in Swakopmund’ (Aufzeichnungen betreffend die Beschaffung von Baggerprähmen für Swakopmund). Captain Connemann speaks again about the exceptional nature of the events that year. Marine Rundschau, ‘Hafenanlage in Swakopmund’, Jun. 1910.} More time was lost until those arrived. In the meantime, small attempts to use the shovel failed to bring much needed relief. Instead, the mere presence of such machinery caused problems. In May 1905, for instance, strong currents pushed it against other ships in the harbour before it was almost
lost completely. Increasingly impatient local newspapers soon used these events to blame colonial officials for their abilities and mismanagement of resources; government officials, on the other hand, pointed to environmental factors – not to acknowledge that these brought limitations but only to outline that it simply had been an ‘exceptional year’ [Ausnahmejahre] in regard to the movement of sand. It would just take some time to deal with it. The fact that such ‘exceptions’ had long been part of the natural process was lost on those involved given an underlying colonial arrogance.

The slow death of the Mole increasingly began to strangle German Southwest Africa. Used less and less, newly arriving cargo had to be unloaded with various kinds of small loading vessels, just like in the early days. Horses, for instance, were put onto rafts before having to swim ashore, terrified [Image 6]. As the Deutsch Südwestafrikanische Zeitung newspaper commented by August 1904, ‘It is indeed striking that the landing process relies on rather primitive means, - but what can one do; most importantly, one achieves their objectives in the end.’ Cargo transported this way often got wet and then rotted on the beach. The same newspaper later noted, ‘the operation using the beach is inherently much more dependent on the condition of the ocean compared to the operation behind the protection of the Mole.’ And whereas one lone voice indicated in hindsight ‘that the forces of nature working along the coast could not be pressured into a system’, most continued to blame it on engineering failures. As a result, and as new and old imperial infrastructure proposals were revived, all ideas continued to stick to the belief in German expertise and superiority. Some of those discussions even made it into debates with the German Reichstag parliament. There, non-experts thousands of miles away pointed to the Mole as an ‘experiment’: it just needed an offshore wave breaker and maybe an expansion. Others refuted such concepts, wondering about what had been learned. Representatives critical of German colonialism, like Matthias Erzberger, now began using such discussions to question

113 Kurd Schwabe, Im Deutschen Diamantenlande (Berlin: E. S. Mittler, 1909), 231.
115 BArch, R 1001/1865a, ‘Hafenanlagen in Swakopmund’ (Auftrag Untersuchung Hafenverhältnisse).
the role of Swakopmund, and German colonialism, overall. In that sense, debates about the 
harbour became a proxy for larger conversations. Officials in Berlin eventually tried to 
进一步 assess the situation from far away. Would a combined onslaught of additional funding 
and technology finally tame the forces of nature? For some, a 50 million Mark investment 
into a harbour with two Moles would do the trick given larger ambitions within the region; 
others questioned this approach wary of the fact that this might not even work or be 
needed. The idea to possibly extend the existing Mole until reaching deeper water gained 
the most traction by 1908. But little happened. Instead, speculations continued to thrive, 
including the possibility to build a harbour in Cape Cross or Sandwich Bay; or, maybe 
dupe the British into selling Walvis Bay after all.

As colonial officials and experts kept talking about possible solutions, a local uprising 
threatened German colonialism and required a quick solution. German colonialism in 
Southwest Africa had faced localized resistance throughout its existence, including the 
aforementioned raids by Hendrik Witbooi. Over time, however, and with often brutal force, 
German colonialists were able to mostly pacify the region. In January 1904, however, the 
Herero revolted against German settlers and colonialists. Increasingly threatened by the 
takeover of their land, and widely mistreated given brutal discriminatory policies, they rose 
up. Later joined by the Nama people and some other groups, their raids increasingly 
endangered German colonialism. Supplies became vital. The German warship Habicht 
brought initial reinforcements to Swakopmund on January 18. During calm sea, the Mole

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117 At least the newspaper Windhuker Nachrichten picked up such divisions as these took shape in the German press. It cited a newspaper from Hamburg discussing the possibility of new investments tied to the harbour of Swakopmund and referenced ‘colonial opponents and grouches.’ Windhuker Nachrichten, ‘Swakopmunder Hafenbau’, 21 Feb. 1907.
118 Deutsche Kolonialzeitung, ‘Dernburgs Studienreise nach Britisch- und Deutsch-Südwestafrika!’ Sonderbeilage zur Nr. 39, 26 Sep. 1908.
119 The colonial government seemed to favor this idea at one point. Schiffbau, 25 Nov. 1908, 142-143, here 143. In Swakopmund locals did not get too excited about this idea. See: Deutsch Südwestafrikanische Zeitung, ‘Aus Swakopmund’, 10 Aug. 1904.
could keep up. Yet rising demands, especially regarding horses, soon threatened disembarking altogether. German sailor Gustav Buß described his experiences during that time in detail, referencing the initial lack of vehicles to unload newly arriving cargo and apparent limitations of the Mole; he also commented specifically on the dangers of breakwaters, cliffs, and currents – and efforts to fight sand. In late July boats tried to bring oxen near the shore hoping they would swim the rest onto the beach – with little success.

As one German colonial official noted, the silting in of the Mole in Swakopmund now ‘severely endangered’ reinforcements and supplies of German troops given its strategic importance. Something had to be done to save the colony.

Now seen as a logistical nightmare in a colonial war, the German Schutztruppe colonial troops stepped up and built a wooden pier south of the Mole [Image 7]. A lack of resources like wood forced German soldiers to rely on military transports for bringing in materials; they also used these means to bring in most workers from Germany. Soon steamers shipped primarily pine wood along with skilled railway pioneers and regular soldiers to Swakopmund. Additionally, the colonial troops exploited Herero labour given growing camp structures in Swakopmund throughout the conflict – one near the Mole. Major Friedrich lead the effort of the railway construction company 2 [Eisenbahn Baukompagnie 2]. Workers determined the required height of the pier before construction began 4 November 1904. The structure called for wooden beams with a diameter of around 30 cm each, sixty-six of them, mostly out of pine wood, and iron rods for additional stability. A steam engine drove those 2.5 – 4 metres into the ground, unless there was hard rock. At that point, detonations blasted holes meant to sufficiently establish each beam. Such tasks, and the project overall, were dangerous, especially for those connecting different beams: only a clear and loud ‘Watch Out!’ by a special foreman provided the necessary warning time for workers to quickly hold on to something as the seven to ten-degrees centigrade cold waves washed over them. As one
report further described, ‘The continual work within the cold ocean wind, in soaked clothing, was no fun at all, but could not be avoided. There were also stark differences in climate [throughout any given day], with cold fog in the morning and evening, yet around noon the heat was often burning hot.’ Not surprisingly, the workers’ state of health was overall terrible, with lots of sicknesses and two casualties due to typhus. More are likely given the role of forced labour. The pier finally opened in April 1905 for cargo, a month later for passengers. Just in time – the Mole had become virtually useless at that point.

Although only meant to bring temporary relief given its improvised structure, the wooden pier soon outwardly showcased the ingenuity of the German military pioneers. It was 275 metres long, 75 metres of it on land. It held two rails of about 60 centimetres track gauge and a third rail for a steam rotary crane. The pier could disembark ships holding seven to ten tons – and that was needed given the widespread economic boom for the coastal towns of Swakopmund and Lüderitzbucht throughout the uprising. Settler Clara Brockmann pointed to the massive relief this pier brought for those landing in Swakopmund: ‘Up to recent years, passengers were carried on land by natives. Two black arms wrapping around the new arrival, and a sturdy negro waded away with them through the water.’ Captain of the German ship Sperber, Wilhelm Bertram, described the wooden pier as ‘an excellent construction’ as well. Even expert voices, still debating and hoping for additional imperial infrastructures given that Swakopmund remained the only ‘entrance’ into central and northern Southwest Africa, began acknowledging the success of this structure. It seemed remarkably stable. To follow one report, ‘When assessing its safety there are three elements to consider: sanding, the ocean, and the naval woodworm.’ Sanding in was not an issue either given its openness between beams. Plus, the pier had also survived major storms. Only the naval woodworm could harm it. However, as one voice made clear, ‘The use of wood to build the pier was considered unavoidable given the need for a speedy construction, [and that] did not seem precarious either, because the naval woodworm had not been sighted in

131 Brockmann, Briefe eines deutschen Mädchens aus Südwest, 11.
132 BArch R 1001/ 1864, ‘Häfen an der südwestafrikanischen Küste’ (Militärpolitischer Bericht).
133 BArch R 1001/ 1865a, ‘Hafenanlagen in Swakopmund’ (Bauprogramm für den Bau einer Landungsbrücke in Swakopmund).
134 Deutsche Kolonialzeitung, ‘Dernburgs Studienreise nach Britisch- und Deutsch-Südwestafrika!’ Sonderbeilage zur Nr. 39, 26 Sep. 1908.
Swakopmund and the neighbouring coast line.'135 All was in good shape, and this time German military expertise had clearly mastered and subjugated the natural elements.

Part III: Molluscs

Yet in the end, the naval woodworm (teredo navalis) did show up. Still to some extent unclear where it originated,136 German colonialists, or maybe American whalers,137 possibly brought it with them to Southwest Africa – originally seemingly to Lüderitzbucht. In Swakopmund it was likely first discovered around December 1904. It is not even a worm. Instead, it is a highly-specialized bivalve mollusc, adjusted for drilling into and living in submerged wood. Early descriptions, however, saw its long and naked, around twenty-centimetre-long and about one centimetre, diameter body to resemble worms.138 Swedish botanist and zoologist Carl von Linné thus categorized over thirty species under teredo navalis, or naval woodworm139 – more colloquially known as ocean termites [Image 8]. The naval woodworm eats wood. And as a typical marine mollusc, it first lives like a tadpole in open waters. Once the size of a pinhead, it digs itself into poles and beams that are surrounded by water, leaving behind only tiny entry holes. Difficult to detect, it employs its tiny sharp teeth to drill, or better, grate and rasp. Over time, teredo navalis forms and expands a honeycomb of passages, while itself, a husk-like creature, stays glued to the actual entry way.140 In Swakopmund, this creature quickly took advantage of new options and destabilized pier beams. Descriptions talk about poles and beams literally riddled long-ways

137 An epidemic of marine wood-boring organisms terrorized numerous structures along the US American coastline at the time. See namely: Ibid.
139 Ernst Troschel, ed., Handbuch der Holzkonservierung (Berlin: Julius Springer, 1916), 208. Troschel remarked that the naval woodworm was ‘particularly ravening [gefrässig] and feared’ in Southwest Africa.
like a sieve. A new actor, originally not factored into German planning, had stepped onto
the stage to threaten imperial infrastructures in Swakopmund.

The danger seemed imminent. According to one early report, ‘If a swarm of naval
woodworm larvae extensively attacks the pole woods, then the woodworm can develop in
such a manner in the wood, that according to present – possibly pessimistic assumptions –
within three months the wood fibre would destroyed to such an extent, that the stability of the
beams sinks to zero.’ A slightly less pessimistic report stated, ‘The beams of the pier are
exposed to the attack of the naval woodworm. Although beams are mostly not protected,
destuctions have been limited. The highest number of worms found in a beam has been
twelve. […] During monthly tests, young animals are often found, a sign, that there is now a
fresh attack.’ One German building officer now admitted to the role of the naval
woodworm in the destruction of a similar project in the German colony of Togo a while ago
and noted that ‘another arrangement for the Swakopmund sites must be considered.’
Concerns increased from thereon forward, and reports soon spoke about ‘its destructive force
[as being] felt so dramatically, that […] due to danger of collapse the use of operation should
be stopped.’

Efforts to deal with this supposed invader began right away. The approach followed
Secretary of Colonial Affairs, Bernhard Dernburg, and his speech given in Swakopmund 21
August 1908 – which included a remarkable, yet late, admission regarding previous
experiences with woodworms: ‘For now, the naval woodworm plays a minor role. In
Lüderitzbucht, where it destroyed the old landing pier completely, it is far more widespread.
Due to constant supervision, a more widespread occurrence [of this creature] will become
apparent soon. At that point, there is an easy solution, because the pier is built in a way, that
it can be modified without disrupting the unloading process. It is thus possible, to update the
pier, so that not a piece of old wood or iron will be left.’ So, the German Schutztruppe
soldiers began building a new structure virtually into the old pier in their effort to avoid
disrupting its use. Although the Herero and Nama people were eventually defeated in what

142 BArch, R 1001/ 1865a, ‘Hafenanlagen in Swakopmund’ (Antrag Untersuchung Hafenverhältnisse).
143 Ibid., (Bauprogramm für den Bau einer Landungsbrücke in Swakopmund).
146 Deutsche Kolonialzeitung, ‘Dernburgs Studienreise nach Britisch- und Deutsch-Südwestafrika!’ Sonderbeilage zur Nr. 39, 26 Sep. 1908.
has been rightfully titled ‘the first genocide of the twentieth century’,\footnote{147 Georg Steinmetz, ‘The First Genocide of the 20th Century and its Postcolonial Afterlives: Germany and the Namibian Ovaherero’, The Journal of the International Institute 12, no. 2 (Winter 2005).} materials to rebuild had to be brought in and troops needed to return home. Workers thus went to work quickly. This time they used impregnated beams surrounded with tin-coated sheet iron. Nonetheless, by 1908 a report in the Deutsche Kolonialzeitung newspaper noted that ‘it might be necessary to renew the pier in a couple of years because of the prevalence of the naval woodworm in the harbour.’\footnote{148 Deutsche Kolonialzeitung, ‘Dernburgs Studienreise durch Britisch- und Deutsch Südwestafrika!’ 12 Sep. 1908.} At that point, the report had already suggested the construction of a new metal pier – as originally suggested by captain Heldt. The naval woodworm had disrupted German activities, as had water and sand previously, and it had sent experts back to the drawing-board.

After battling water, sand, and the naval woodworm, and more than a decade after the original foundation of Swakopmund in 1892, a metal pier took shape. Construction began in 1911, together with a bridge crossing the Swakop River. This time, as one contemporary commentator noted, ‘Wood may not be used for the subsection as construction material’\footnote{149 BArch R 1001/ 1865a, ‘Hafenanlagen in Swakopmund’ (Bohrversuche Laufenburg; Bauprogramm für den Bau einer Landungsbrücke in Swakopmund).} for the pier. Additional surveys had measured the ocean floor regarding the drilling process. Slowly and steadily, a large metal pier grew into the rough and sandy waters of the Atlantic Ocean. It was supposed to be around 640 metres long, crossing breakwaters and making the landing process much easier.\footnote{150 Ibid.} After all, accidents had continued to happen. For instance, in September 1909, the ship Eduard Bohlen ran aground. Another ship – after saving those aboard – tried to tow it away but was unable to do so. In late July 1911, the tugboat Windhuk of the Woermann-Line sank. Three massive waves had hit it with full force, sinking the boat rather quickly. Three men died – a machinist and two African Kru men.\footnote{151 Der Südwestbote, ‘Schlepper Windhuk gesunken’, 29 Jul. 1911.} In another instance an anchor-chain ripped due to strong currents, and the fishing boat Möwe was lost.\footnote{152 BArch R 1001/ 1868, ‘Seeunfälle’ (Eduard Bohlen), (Untergang des Schleppers Windhuk), and (Seeamt Hamburg).} Plus, and as the Koloniale Zeitschrift newspaper now put most bluntly, it is the duty of the Germans to continue with ‘the creation of better living conditions, which nature had failed to provide, namely concerning access to water and good infrastructure.’\footnote{153 Koloniale Zeitschrift, ‘Südwestafrika’, 1 Feb. 1907.} Germany had
invested much at this point after all,\textsuperscript{154} which speaks to the financial strains these environmental factors put onto German colonialism.\textsuperscript{155} Voices wondering about the difficulties of nature for hydraulic engineering were still drowned out\textsuperscript{156} given that the metal pier was to now help Swakopmund keep ‘its position as the major gateway for trade.’\textsuperscript{157}

The metal pier was never fully completed. Following the assassination of archduke Franz Ferdinand in Sarajevo in the summer of 1914, and given tensions within Europe, the July Crisis turned into World War 1. The Cape Colony eventually joined the war effort on the side of the Triple Entente, and together with the Royal British Navy had little issues taking over German Southwest Africa in early 1915. For them, controlling Swakopmund and Lüderitzbucht would have done the trick. Soon occupying forces dismantled the wooden pier. By then the construction on the metal pier had reached about 240 m. Occupiers left it intact – but it was virtually worthless. As one German publication later put it, ‘After the war England developed Walvis Bay and disabled Swakopmund.’\textsuperscript{158} Hence, Walvis Bay became the most important harbour in Southwest Africa, a location geographic and environmental circumstances had pointed to all along.

\textbf{Conclusion}

German colonial rule in Southwest Africa officially ended with the Treaty of Versailles, and the area turned into a Mandate for South Africa; local struggles against nature, and its accompanying narratives, however, continued beyond 1919. In mid-December 1933, major floods brought massive destruction to Swakopmund. It destroyed the bridge across the Swakop River, the main connection to Walvis Bay. Again, storylines continued to tell tales of conquest. According to one recollection, ‘The inhabitants of Swakopmund in their struggle against the Swakop flood were an excellent example of endurance, diligence

\textsuperscript{154} According to one publication, it would be unconscionable to acquire Walvis Bay now. Külz, Deutsch- Südafrika im 25. Jahre Deutscher Schutzherrschaft, 104.

\textsuperscript{155} Representatives within the German Reichstag parliament pointed to this on numerous occasions. In 1906, for instance, one representative noted: ‘Also, the site of the Mole in Swakopmund demonstrates, that we did not have a lucky hand there, and that this situation cost us dearly afterwards, money wasted that will lead to additional squandered expenses in the future.’ Reichstag 74. Sitzung, 24 Mar. 1906, 2270 (Böhendorf-Kölpin), accessible at http://www.reichstagsprotokolle.de/Blatt_k11_bsb00002826_00000.html, last accessed 23 Jul. 2017.

\textsuperscript{156} BArch, R 1001/ 1865a, ‘Hafenanlagen in Swakopmund’ (Untersuchung Hafenverhältnisse).


and co-operation.’

Moreover, publications namely in the interwar period spoke highly of German accomplishments tied to infrastructures in Swakopmund, especially compared to Walvis Bay. Plus, the German coastal town is clean, friendly, and orderly, and includes ‘green areas magically created from the desert along the coastline.’ Walvis Bay, on the other hand, though a busy harbour, lacked streets, trees, and bushes. In that sense, the ambitions of a young empire to do better than Britain easily outlived German colonialism in the region.

Overall then, and as this article tried to illustrate, environmental factors played an important role within German Southwest Africa. The activities of the British in the region mattered, of course. After all, they took over Walvis Bay early on, thereby complicating access for any other colonial power. Additionally, local groups challenged German colonial hopes and fantasies at numerous junctures. Hendrik Witbooi resisted against German efforts to control certain areas early on and thereby shaped German colonialism – as outline most recently by historian Adam Blackler. In 1904, the Herero – later joined by the Nama people – openly revolted against the Germans. Their efforts further disrupted and reshaped German colonial activities. Plus, the German empire lost World War 1 and its colonies – maybe they might have been ultimately successful if they had had more time? Nonetheless, and as outlined here, environmental factors, including water, sand, and molluscs, mattered as well. Hence, by focusing on Swakopmund, by paying some attention to nature, and by thinking about German fantasies tied to imperial infrastructures, historians can see how there is a wonderful mixture of many agencies at play within German colonialism.

Today, in post-independence Namibia, Swakopmund has no actual harbour. Instead, it has turned into an attractive seaside resort, arguably stuck in its colonial past. Marketed as the most German city of modern Namibia, the remains of colonialism are widely visible: proud avenues, Gründerzeit style buildings, monuments tied to German glory, and a very visible German-speaking Südwest Southwest community. Within this colonial landscape, visitors find the remains of the Mole, including a lighthouse and the Marinedenkmal memorial still commemorating German reinforcements in 1904. These days the Mole is in part silted in – although by now the site has been appropriated into a beach-resort flair.

Namely during the holiday season, locals and tourists alike use it as a promenade to wander, sunbath laying on an ever-shifting sandy beach, or take a swim within the relative safety it provides against dangerous ocean currents. A luxury hotel, named *Strand Hotel* beach hotel, has recently opened for tourists from around the world: ‘Where the Namib dunes meet the Atlantic Ocean’, is its motto. Slightly south, and well into the 1970s, visitors could detect some remains of the wooden pier. Next to it still stands the unfinished metal pier [Image 9]. In 1924, South Africa had removed cranes, leaving behind what locals now call the jetty. These days local fishermen frequent it. It was supposed to be torn down several decades ago. However, a local, mostly *Südwester* German-speaking, effort saved its structures and heritage from destruction. At the same time, desert landscapes have covered signs of German exploitation and destruction given that bones of Herero and other victims of genocide are still scattered in the desert outside Swakopmund. Imperial infrastructures were never for them. This makes it easy for some within the *Südwester* community to relishes in colonial nostalgia when speaking about the remains of the pier ‘as a witness of the hard fight of inhabitants against the harsh Atlantic waters.’ In fact, these days an upscale restaurant is located at the tip of that metal pier, appropriately called *Jetty 1905*: ‘Jetty 1905 is much more than a restaurant, it’s a landmark!’ reads one of its advertisements. Like the Mole and its hotel, the restaurant fits perfectly into still lingering narratives of conquest.

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[Image 1]: Postcard, ‘At the Mole in Swakopmund.’ Kreuz und Quer durch Deutsch-Süd-West-Afrika: Eine Sammlung von 100 der schönsten Ansichten (around 1906), 17 (University Library Frankfurt);

[Image 2]: ‘Ground Cover,’ Deutsches Kolonial-Lexikon, 1920 (University Library Frankfurt);
[Image 3] ‘Coastline of Swakopmund’ (Oct. 1902) including two proposed structures (Zeitschrift für Bauwesen, 1904);

[Image 4]: Postcard, ‘Swakopmund – Beach’, with lighthouse and Mole, (University Library Frankfurt);
[Image 5]: ‘Sketches of the Swakopmund Landing Spot,’ (Marine-Rundschau, ‘Meinungsaustausch,’ June 1908;

[Image 6]: Unloading horses in Swakopmund (University Library Frankfurt);
[Image 7]: Wooden jetty, Deutsches Kolonial-Lexikon, 1920 (University Library Frankfurt);

[Image 8]: teredo navalis (University of Michigan, Museum of Zoology);

[Image 9]: Metal pier/ jetty, personal photo (2014);