

Future Pasts

FUTURE PASTS WORKING PAPERS NO. 13

Historicising black rhino in Namibia: colonial-era hunting, conservation custodianship, and plural values

Sian Sullivan, Simson !Uri#khob, Birgit Kötting, Jeff Muntifering and Rob Brett

December 2021

<http://www.futurepasts.net> @Future_Pasts



THE UNIVERSITY
of EDINBURGH



Copyright © 2021,
Sian Sullivan, Simson !Uri+khob, Birgit Kötting, Jeff Muntifering and Rob Brett

Working Paper Series
Bath Spa University
Newton Park, Newton St. Loe
Bath BA2 9BN
United Kingdom

www.futurepasts.net

futurepastscontact@gmail.com

ISBN: 978-1-911126-18-8

Future Pasts draws on Arts and Humanities research methodologies to document and analyse culturally-inflected perceptions and practices of sustainability. The project has a particular geographical focus on west Namibia, where three of our core research team have long-term field research experience.

The project seeks to:

- enhance understanding of sociocultural, economic and environmental changes in historical and post-independence contexts;
- document and support cultural heritage and indigenous knowledge regarding present and historical cultural landscapes of west Namibia;
- extend analysis and understanding of the historical ecologies of the Namib;
- interrogate interpretations of 'sustainability', particularly those contributing to the promotion of a growth-oriented 'green economy';
- foster cross-cultural public discussion of concerns relating to environmental change and sustainability;
- critically engage with the power dimensions shaping whose pasts become transferred forwards to the future in contemporary approaches to environmental conservation and sustainability.

Future Pasts was funded primarily through a Major Research Grant from the UK's Arts and Humanities Research Council (AHRC award no. AH/K005871/2, 2013-2019), under the Care for the Future Theme's highlight notice on 'environmental change and sustainability' (see <http://careforthefuture.exeter.ac.uk/>). Starting in October 2013, **Future Pasts** involved five UK-based academics (see <https://www.futurepasts.net/people>).

Namibian partner organisations have included the National Museum of Namibia, Gobabeb Research and Training Centre, Save the Rhino Trust, the Namidaman Traditional Authority, Sesfontein Conservancy and Mamokobo Film and Research.

Although the formal funding period of the project is now over, we continue to have research material to share through this Working Paper Series. We also continue to be interested in making available work that fits with the project's research themes, but has not yet found a publication home – see below.

Future Pasts *Working Paper Series*

The **Future Pasts Working Paper Series** aims to facilitate rapid distribution of research findings and work in progress by researchers associated with the **Future Pasts** project. We also welcome relevant contributions by post-graduate students and other associates of **Future Pasts**. The series aims to open up discussion among the global community of scholars, policymakers and practitioners on pressing issues concerning conservation, sustainability, heritage, knowledge and value that are exemplified in west Namibian social and environmental contexts. All **Future Pasts** working papers are available to download free of charge in PDF format via the **Future Pasts** website (<http://www.futurepasts.net/future-pasts-working-papers>).

All our papers receive a light-touch peer review, the copyright is retained by the author(s), and authors are welcome to publish further iterations of papers in journals and other formats (references and notes may be formatted as appropriate for such future publications).

The opinions expressed in the papers are solely those of the author(s) and should not be attributed to the project funders, Bath Spa University, or partner universities and organisations. We welcome comments on individual working papers, which should be directed to the author(s), or through futurepastscontact@gmail.com.

More information about **Future Pasts** and our working paper series and other activities can be found on our website, www.futurepasts.net.

Historicising black rhino in Namibia: colonial-era hunting, conservation custodianship, and plural values

Sian Sullivan¹, Simson !Uri#khob², Birgit Kötting³, Jeff Muntifering⁴ and Rob Brett⁵

Abstract

The black rhinoceros (*Diceros bicornis*) is a threatened species of which the south-western subspecies (*D. bicornis bicornis*, synonym *D. bicornis occidentalis*) persists on communal land and elsewhere in Namibia. It does so despite its clearance from most of the animal's former range due to the expansion of colonial-era hunting with firearms, and the concentration of marginalised Namibians alongside this high-value species in the challenging landscapes of north-west Namibia in particular. We trace what is known about the patterns and impacts of colonial-era hunting of rhino in the territory that is now the modern state of Namibia, introducing an online map of documented historical encounters with rhino in Namibia and the pressures on them from late 1700s. This map of historical encounters is currently complementing baseline information on the past distribution of black rhino in Namibia held by the Ministry of Environment, Forestry and Tourism (MEFT) in support of its collaborative Black Rhino Custodianship Programme (BRCP). We outline contemporary pressures on black rhino and conservation responses to these circumstances, tracing the emergence of a novel approach to rhino conservation in Namibia that recruits people living under different kinds of land tenure as 'custodians' of these animals, so as to support the reintroduction of both black and white rhino throughout their former range. We focus in on proactive rhino conservation work in communal-area conservancies of west Namibia which combines the translocation of black rhino to areas of its former range with an array of endeavours to pluralise the animal's contemporary value, including rhino tourism, the recruit of local 'rhino rangers', and 'rhino pride' initiatives. In this context, and differently to custodians on freehold land, a vulnerable, large-bodied, space-requiring and sometimes dangerous mammal with very high international conservation value, simultaneously lives alongside peoples impoverished historically and with their own ambitions towards self-determination. This custodianship model of rhino conservation can be understood in part as a creative species conservation response to the very challenging structural circumstances effected by both past impacts on rhino and present inequality in land distribution and tenure, both of which add heat to questions of access to land and resources, including wildlife.

Key words. Black rhino; *Diceros bicornis bicornis*; Namibia; colonialism; hunting; rhino conservation; conservation custodianship; values

¹ Corresponding author: Professor of Environment and Culture, Bath Spa University (UK), s.sullivan@bathspa.ac.uk.

² CEO since 2014 of Save the Rhino Trust, Namibia.

³ Control Warden of Namibia's Black Rhino Custodianship Programme, Ministry of Environment, Forestry and Tourism (MEFT).

⁴ Science Adviser, Save the Rhino Trust (SRT), and Adjunct Professor, Namibia University of Science and Technology (NUST).

⁵ Senior Technical Specialist (Africa), Fauna & Flora International.

1. Introducing Namibia's black rhino⁶

The black rhinoceros (*Diceros bicornis*) is a critically endangered species of which the south-western subspecies (*D. bicornis bicornis*, synonym *D. bicornis occidentalis*) currently thrives on communally-managed land and elsewhere in Namibia. It does so despite the catastrophic clearance of this animal from most of its former range due to the expansion of colonial-era hunting with firearms (Joubert 1971), and the concentration of this high-value animal alongside economically marginalised Namibians in the challenging landscapes of Namibia's remaining communal areas. We review these circumstances and consider the broader possibilities embodied by a devolved custodianship model of species conservation that has arisen in their wake.

The black rhino *D. bicornis* is on Appendix 1 of the International Union for the Conservation of Nature (IUCN) Convention on Trade in Endangered Species (CITES), meaning that trade in this species and associated products (such as rhino horn) is heavily restricted⁷. In this context, the south-western black rhino of Namibia – *D. bicornis bicornis* – is considered 'unique', because the subspecies is 'unreconstructed' through 'reintroduction from other metapopulations' (Hearn 2003: vii).⁸ The desert-dwelling population of *D. bicornis bicornis* in west Namibia specifically has been recognised by the African Rhino Specialist Group (AfRSG) as a 'Key 1 Population' representing 'the only desert ecotype population of black rhino', as well as one of the only remaining populations globally that 'has survived on land that has no formal conservation status' (Hearn 2003: 8). The contiguous black rhino population in Etosha National Park (ENP) rivals in size populations of rhino subspecies elsewhere (Hearn 2003: 8). Black rhino are also sustained beyond Etosha and north-west Namibia as an outcome of a proactive 'custodianship' programme seeking to re-establish this subspecies throughout its former range (Kötting 2020). This Black Rhino Custodianship Programme (BRCP) works innovatively with a very suboptimal history of land distribution, so as to include habitats under both freehold and communal forms of land tenure. From a species conservation perspective seeking to maintain the evolutionary potential of black rhino in a context of significant erosion of genetic diversity through past (especially colonial) impacts on populations throughout its former range, these populations of the south-western subspecies are recognised as both an 'evolutionary significant unit' and a coherent 'management unit' (Moodley *et al.* 2017).

⁶ This paper builds on the Foreword by Sian Sullivan and Jeff Muntifer to Simson !Uri#khob's recently published MSc dissertation (!Uri#khob 2020[2004]). The paper was first presented at the virtual workshop "Conservation in Africa" organised at the University of Cologne by David Anderson and Michael Bollig, 19-21 April 2021.

⁷ <https://www.cites.org/eng/app/appendices.php> – unless otherwise indicated all websites were last accessed on 9 December 2021.

⁸ IUCN recognises all current Namibian black rhinos as *Diceros bicornis bicornis*, known by the common name 'south-western black rhino' and once widespread throughout the southern African Cape. Groves and Grubb (2011) and more recent genetic research (Moodley *et al.* 2017), however, assert Namibian black rhino to in fact be *D. b. occidentalis* rather than *D. b. bicornis*, the latter of which is considered by these and other authors to be extinct. The near-threatened subspecies *D. b. occidentalis* – the extant subspecies documented for southern Angola and northern Namibia – is thus recognised as a synonym for Namibian black rhinos. It is perhaps worth noting that the historical distribution of black (and white) rhino in Namibia – as indicated by documented historical encounters in Figure 2 – suggests continuity of rhino presence between north and south of Namibia, rather than a geographically disjunct population.

Our paper is organised around two main sections. In Section 2 we trace in some detail what is known about the patterns and impacts of colonial-era hunting of rhino in the territory that is now the modern state of Namibia. We introduce here an online map of documented historical encounters with rhino in Namibia, showing where rhino were found in the past and the pressures on them from the late 1700s (Sullivan 2021a, building on especially Joubert 1971, 1984; Rookmaaker 2007). This map of historical encounters is currently complementing baseline information on the past distribution of black rhino in Namibia held by the Ministry of Environment, Forestry and Tourism (MEFT) in support of its collaborative Black Rhino Custodianship Programme (BRCP). We also consider some intersections of these documented encounters with what can be conjectured from archaeological literature, fragmented historical accounts, and ethnography about the roles of rhino in indigenous hunting and cosmology prior to colonial encounter. Our aim in this section is to respond to the observation that ‘examination of the relationship between local communities and conservation issues requires deeper understanding of the history of the region as well as factors shaping regional political concerns’ (Urikhob 2020[2004]: 1). Namibia’s ferociously turbulent colonial history attacked Africans and wildlife alike. It is clear that pre-colonial presence of rhino in especially southern and central Namibia was destroyed through colonial hunting by diverse men with firearms in the 1800s in particular, mostly for ‘sport’, meat and hides. Demand for rhino horn itself is a more recent pressure, on an already very damaged population.

In Section 3 we outline post-independence pressures on black rhino and conservation responses to these circumstances. We trace the emergence of a novel approach to rhino conservation in Namibia that recruits people living under different kinds of land tenure as ‘custodians’ of these animals, so as to support the reintroduction of both black and white rhino throughout their former range (Kötting 2020). We focus in this section on proactive rhino conservation work in communal-area conservancies of west Namibia which combines the translocation of black rhino to areas of its former range with an array of innovations to pluralise their value, including rhino tourism, the recruit of local ‘rhino rangers’, and innovative ‘rhino pride’ initiatives (Muntifering *et al.* 2017, 2019, 2020). In this context, and differently to custodians on freehold land, a vulnerable, large-bodied, space-requiring and sometimes dangerous mammal with very high international conservation value, simultaneously lives alongside peoples impoverished historically and with their own ambitions towards self-determination. This custodianship model of rhino conservation can be understood as a creative response to the very challenging structural circumstances effected by both past impacts on rhino, and present inequality in land distribution and tenure that adds heat to questions of access to land and resources, including wildlife (Sullivan 2002; Taylor 2012; Odendaal and Werner 2020). We wish to celebrate this conservation story, whilst simultaneously being clear about the socio-political complexity within which it is embedded. Since especially 2014, this context has seen a significant rise in rhino poaching, responded to by an intensification of anti-poaching effort across the country (Schneider 2021), leading in turn to a decline in illegal hunting of rhino (Nyaungwa 2021). These recent circumstances echo historical dynamics of the expansion and contraction of rhino populations in south-western Africa. Only time will now tell how long-lasting the present fall in poaching will be.

What does seem certain, however, is the national and local commitment to ensuring continuity of Namibian black rhino into the future.

2. *Diceros bicornis bicornis* – a Namibian history

Namibia is renowned for its rock art – both petroglyphs and paintings – found where appropriate surfaces exist and providing testament to the dynamic pre-colonial presence of diverse human actors, stretching back thousands of years (for example, Rudner 1957; Jacobson 1976; Wadley 1979; J. Kinahan 2001[1991]; Pleurdeau *et al.* 2012). From the Orange to the Kunene Rivers in west Namibia, images of rhino are a notable component of these assemblages (Joubert 1971, 1984). A recently surveyed petroglyph site west of the |Ui-laes / Twyfelfontein UNESCO World Heritage Site, awarded especially for its rock art record of ‘ritual practices relating to hunter-gather communities in this part of southern Africa over at least two millennia’⁹, revealed 46 images of rhinoceroses, of which 20 are identified clearly as black rhino (Lenssen-Erz 2018).¹⁰ Rhino feature prominently in engravings at a site north of |Ui-laes recorded by Eugene Joubert some decades ago as ‘Sossos’ and known locally as #Khari (‘small’) Soso (Figure 1). It seems probable that black rhino in what is now Namibia have long been attributed multiple kinds of value by diverse peoples encountering this charismatic animal.

Figure 1. Petroglyphs of rhinos at #Khari Soso. Photo: Sian Sullivan, 24 February 2015.



⁹ <https://whc.unesco.org/en/list/1255/> last accessed, 11 September 2020.

¹⁰ Indeed, the familiar logo of Namibia’s Save the Rhino Trust, designed by one of the NGO’s founders, the late Blythe Loutit, was inspired by an engraving of a black rhino at |Ui-laes / Twyfelfontein: see <http://www.savetherhinotrust.org/>

When Namibia's black rhino are invoked today it is frequently in the context of both concern regarding its exploitation for rhino horn, as well as celebration of its conservation beyond national parks in Namibia's north-west. In only a short period of recent history, rhino horn for consumption has become a commodity with destructively high value in specific markets (Bradley Martin and Bradley Martin 1982; Leader-Williams 1992; Moodley *et al.* 2017), prompting urgent conservation responses that can be highly militarised (Ferreira and Okita-Ouma 2012; Hanks 2015). The market value of rhino horn is now so high that some economists document the profitability for speculators to collude so as effectively 'to coordinate an extinction strategy' by maximising profits through simultaneously stockpiling rhino horn and 'depressing wild stocks' (Mason *et al.* 2012: 180).

Historically, however, it was not the commodity value of rhino horn that contributed to the demise of rhinoceros populations across southern Africa. In the early years of an expanding commercial hunting frontier linked with European colonial expansion, rhino instead were attacked relentlessly for their meat and hide, as well as just for 'the sport' of killing them. The virtual extermination of these animals was justified on the grounds of its 'unpleasant character', being described as variously 'witless, choleric, dyspeptic and unsociable' (Mackenzie 1987: 53). In just a few short pages of the narrative by British army captain James Edward Alexander from his impressive 1836-1837 travels in southern and central Namibia, the black rhino is characterised as a *monster* and a *brute*, whose behaviour is *wicked, fiendish* and *spiteful* (Alexander 2006[1838] vol. 2: 3-11). Such terms negate the possibility of empathy or concern for these animals, justifying attacks on them whilst valorising the heroism of the hunter. In the late nineteenth century, a consolidated European mania for trophies and natural history specimens presented a new threat, leading, for example, to the last two white rhinoceroses (*Ceratotherium simum*) of Mashonaland being shot (by a Robert Coryndon) to be mounted and sold: 'one to the Rothschild Collection [in Tring, Hertfordshire, UK], the other to the Cape Town Museum' (Mackenzie 1987: 55; also Rookmaaker 2007).

Figure 2 shows the locations of documented historical encounters with rhinos in the western part of southern Africa. Full descriptions of these encounters are available in the online version of this map linked at <https://www.futurepasts.net/historical-references-rhino-namibia>, as well as in a timeline of reviewed literature online at <https://www.futurepasts.net/encounters-with-rhino-timeline>. As Eugene Joubert wrote in 1971 (p. 36),

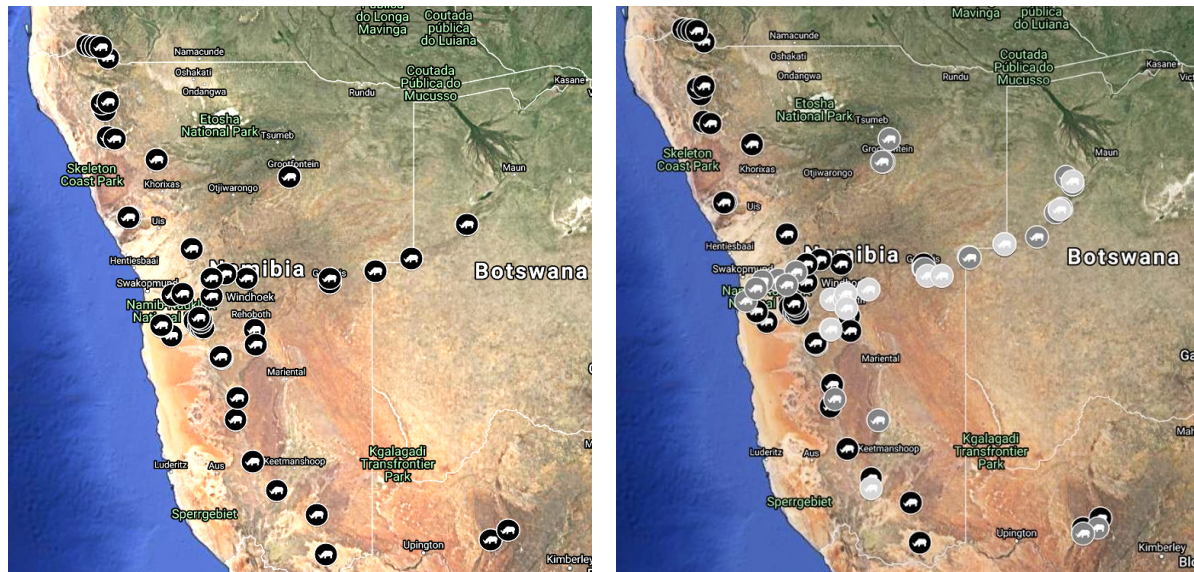
before 1900, the black rhinoceros was distributed from the Kunene river in the north, down to the Orange River in the south, and extended westwards to the eastern boundary of the Namib desert ... [although] [t]hey may have entered the Namib desert down river courses during the rainy season.

The map and accompanying documentation confirms that historical processes leading to the demise of black rhino in Namibia match the broad trajectory outlined above. We elaborate these encounters below to illustrate something of the character of this historical assault on rhino, so as to situate present conservation response and practice.

Figure 2. Historical distribution of documented encounters with rhinos in Namibia, based on a spatialised reading of historical texts (as referenced on the online version of the maps at <https://www.futurepasts.net/historical-references-rhino-namibia>), combined with other reviews (notably Joubert 1971, 1984 and Rookmaaker 2007).

The map on left shows placemarks for animals fairly definitively identified in the reviewed literature as ‘black rhino’ and thus as *Diceros bicornis bicornis*; map on right shows the full dataset of recorded encounters with both black and white (*Ceratotherium simum*) rhino: here, some – perhaps many – of the rhinos reported in the west that are not identified as either ‘white’ or ‘black’, as well as those putatively identified as ‘white’, might in fact have been *D. bicornis bicornis*, i.e. it is probable that the placemarks on this map under-record known historical encounters with black rhino.

Nb. we are also aware of a number of historical rhino sightings in the north-east along the Namibia-Botswana border and hope to include this information in due course.



Historicising rhino presence: 1700s-1800s

The first documented encounter between ‘Europeans’ and rhino in Namibia appears to be that of the Afrikaner ‘farmer and elephant hunter’ Jakobus Coetzé in 1760 (also Coetse, Coetsee). Accompanied by 12 members ‘of the Gerigriquas Nation’ from the Cape¹¹, Coetzé journeyed from his home at Aurora on the west side of the Piquetberg northwards to the Gariep (!Garieb) – as the westward reaches of the Orange River was then known (Mossop 1935: 277, also Mossop 1947: 94). He carried a permit from the Cape Governor, Ryk Tulbagh – then ‘Councillor Extraordinary of Dutch India and Governor of the Cape of Good Hope and Dependencies thereof’ (Mossop 1935: 277) – to shoot elephant beyond the Orange (Du Pisani 1986: 14; Wallace 2011: 50-51), claiming during his lifetime ‘to be the first European to have penetrated far beyond the Great (Orange) River’ (Mossop 1947: 94; also Mossop 1935: 9). Coetzé observed ‘a multitude’ of rhinoceroses, lions and giraffe in the land of the ‘Great Amacquas’, near Warmbad (Mossop 1935: 287)¹², at a time when encounters with such animals were already becoming rare in the increasingly settled land south of the Orange. One year later Coetzé accompanied a ‘scientific expedition’ from Cape Town led by Hendrik Hop

¹¹ Khoer pastoralists from the western Cape.

¹² Hence ‘the earliest record in the literature of the occurrence of rhinoceroses in South West Africa’ seems to be one year earlier than the Hendrik Hop expedition of 1761, reported by Joubert (1971: 34).

(1716-1771), a ‘Burgher-Captain’ for the Dutch East India Company (Vereenigde Oostindische Compagnie, VOC) (Huigen 2009). Near a Nama settlement on the Lion River between the Great and Little ‘Karras’ Mountains, Hop describes how rhinos, giraffes, buffaloes, zebras, quaggas, kudus, elands, hartebeests and gnus ‘offered wonderful opportunities for hunting’ (Vedder 2016[1938]: 20).

Some decades later in January 1791, travelling northwards through the waterless stretches of southern Namibia, an expedition led by Willem van Reenen reportedly sustained itself by hunting rhinoceroses, giraffes and buffalo. The expedition reached the hot springs of Rhenius mountain [seemingly present-day Rehoboth] in ‘the land of the Heydamarassen [Damara / #Nūkhoen]’, where a copper mine was located (Vedder 2016[1938]: 33; also J. Kinahan 1980: 18). Van Reenen’s party commenced their journey home in February 1791, reaching Modderfontein/Keetmanshoop in March and staying with a Gideon Visagie. Visagie and his wife were raising and dealing in cattle there, leading in Van Reenen’s report to perhaps ‘the first mention of a white woman having her home in South West Africa’ (Vedder 2016[1938]: 32-33, 36). Van Reenen traded six of his best guns with local people for cattle, arriving back at his homestead on the Olifants River in the Cape on 20 June, his party apparently having killed 65 rhinos, six giraffes and other game in ‘no inconsiderable quantity which the big-game hunter did not regard as worthy of mention’ (Vedder 2016[1938]: 36-37). Reportedly, Van Reenen also returned to the Cape with eight ‘Damaras’ (Herero)¹³ whom historian Jan-Bart Gewald labels as ‘slaves’, noting that the Dutch East India Company ‘permitted the free trade in slaves’ from this year (Gewald 1995: 423, and references therein).¹⁴

The first recorded European encounters with rhino further north appear to be linked with a 1793 journey from the Cape to Walvis Bay by the ship *Meermin*, under a Captain Duminy. Duminy was under orders via the Dutch East India Company to ‘annex part of the coastline’ for the Netherlands (Du Pisani 1986: 13; J.H.A. Kinahan 2000: 15; also Heawood 1912). He and his crew experienced uneasy relations with inhabitants of Walvis Bay, who were armed with assegais, and refused to bring cattle for exchange or act as guides (J.H.A. Kinahan 2000: 15). This voyage also carried Pieter Pienaar – ‘a well-known big game hunter’ – and the brothers (and prominent Cape *burghers*) of Willem van Reenen mentioned above: Sebastiaan Valentijn van Reenen and Dirk Gijsberg van Reenen (Du Pisani 1986: 13). At Walvis Bay they were met by their guide Barend Freyn (Vedder 2016[1938]: 37; also in Green 1953: 203) who had travelled overland from Warmbad and led them to the Swakop / Tsoaxau river

¹³ Historically, the ethnonym “Dama-ra” is based on an “exonym”, i.e. an external name for a group of people, “Dama” being the name given by Nama for darker-skinned people generally (With ‘ra’ ‘referring to either third person feminine or common gender plural’ – Haacke 2018: 140). Since Nama(qua) pastoralists were often those whom early European colonial travellers first encountered in the western part of southern Africa, the latter took on this application of the term “Dama”. This usage gave rise to a confusing situation in the historical literature whereby the term “Damara”, as well as the central part of Namibia that in the 1800s was known as “Damaraland”, tended to refer to expansionary cattle pastoralists known as Herero (for example, in Alexander 2006[1838]; Galton 1890[1853]; Tindall 1959). The terms “Hill Damaras” (“Berg-Dama” / ‘!hom Dama’ / and the derogatory “klip kaffir” and “Plains Damaras” (or “Cattle Damara” / *Gomadama*) were used to distinguish contemporary Damara or #Nūkhoen (i.e. “Khoekhoegowab-speaking black-skinned people”) from speakers of the Bantu language otjiHerero.

¹⁴ Gewald (1995: 424) thus includes slaves as part of Visagie’s business, writing that in present-day Keetmanshoop he had ‘built up a raiding/trading dynasty based on the exchange of cattle and slaves for guns, powder and lead’.

where they found fresh water, luxuriant vegetation and a great number of so-called ‘game’, such as elephants, rhinoceroses, gemsbuck and springbuck (Vedder 2016[1938]: 38). Pienaar and his party followed the Swakop eastwards on a hunting trip into the interior, reportedly encountering ‘over 300 rhinoceros and even a greater number of elephants, gemsbuck, springbuck, buffaloes, and lions’; killing 20 rhinos, three elephants and – in a close echo of Willem van Reenen’s account above – ‘much other game which he never counted’, thereby providing food for those who joined his expedition (Mossop 1935: 11; Vedder 2016[1938]: 38).

A handful of decades later, the narrative of *An Expedition of Discovery into the Interior of Africa* by British army captain James Edward Alexander again indicates that black rhino were prevalent in southern and central Namibia in 1837, although perhaps not as ubiquitous as suggested by the accounts above.¹⁵ The first apparently black rhinos encountered by Alexander’s colonial exploration party were along the ‘Chuntob’ River (Tsondab) at ‘Bulls Mouth Pass’ – or ‘Kopumnaas’ as Alexander rendered the Khoekhoegowab name: ‘so named from its being full of dangers, like the Valley of the Shadow of Death’ (Alexander 2006[1838] vol. 1: 297, 299-300): see Figure 3. The landscapes approaching this pass are described by Alexander as the ‘domain’ of the black rhinoceros, which his expedition ‘seemed now to have invaded’ (Alexander 2006[1838] vol. 2: 1). Alexander’s ‘two first rhinoceroses, being continually on the move, escaped from us though we tickled them roughly’ with gunshots (Alexander 2006[1838] vol. 1: 297, 299-300). This encounter is enough to prompt a lengthy description of the animal which:

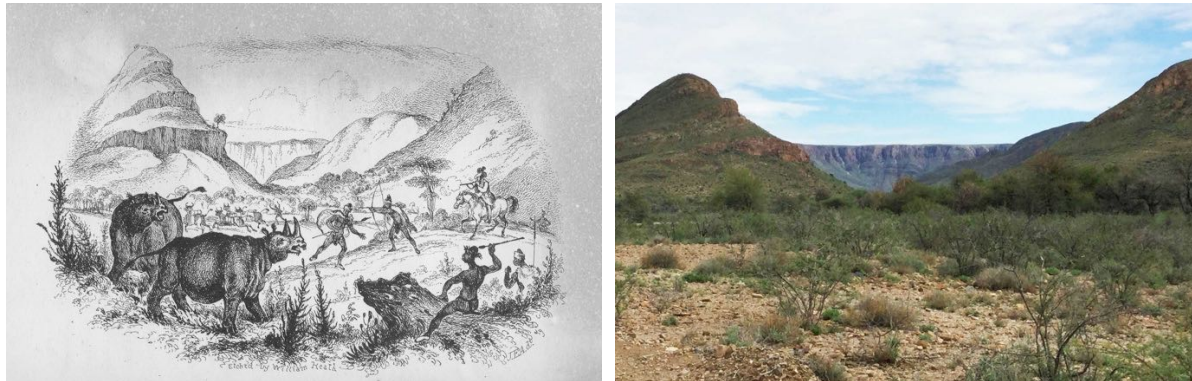
resembles in general appearance an immense hog; twelve feet and a half long, six feet and a half high, girth eight feet and a half, and of the weight of half a dozen bullocks¹⁶; its body is smooth, and there is no hair seen except at the tip of the ears, and the extremity of the tail. The horns of concreted hair, the foremost curved like a sabre, and the second resembling a flattened cone, stand on the nose and above the eye; in the young animals the foremost horn is the longest, whilst in the old ones they are of equal length, namely a foot and a half or more: though the older the rhinoceros the shorter are its horns, as they wear them by sharpening them against the trees, and by rooting up the ground with them when in a passion. ... on the approach of danger, if his quick ear or keen scent make him aware of the vicinity of a hunter, the head is quickly raised, and the horns stand stiff and ready for combat on his terrible front. (Alexander 2006[1838] vol. 2: 1-2)

Whilst Alexander reconnoitred the Pass, his party resumed ‘the sport on the plain, and two more rhinoceroses were mortally wounded’ – as depicted in Figure 3. The people ate apparently ten pounds of flesh each in as many hours’, talking all the time ‘of their day’s adventures...’ (Alexander 2006[1838] vol. 2: 9).

¹⁵ The narratives of Alexander and other key accounts written by historical travellers, hunters, traders and missionaries to especially west and north-west Namibia and in the vicinity of Etosha Pan are being mapped at <https://www.etosha-kunene-histories.net/wp4-spatialising-colonialities>.

¹⁶ This seems large for a black rhino. Given that Alexander identifies the rhino here clearly as ‘black’ it is possible he was exaggerating these measurements for effect.

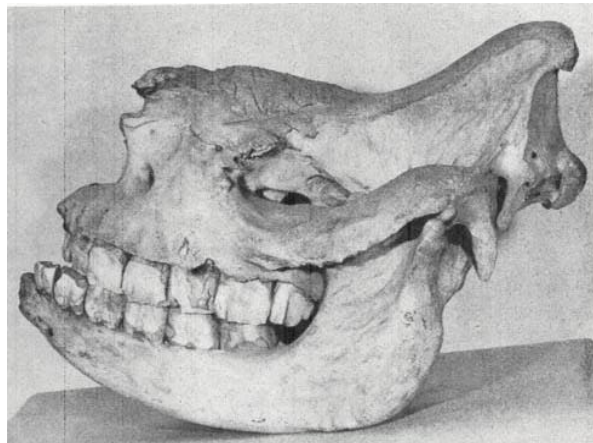
Figure 3. On left, rhinoceros hunt in Bull's Mouth Pass, engraving by William Heath (1795-1840) based on sketch by Alexander (Alexander 2006[1838], vol. 1 facing p. 175; Rookmaaker 2007: 106) (source: http://libweb5.princeton.edu/visual_materials/maps/websites/africa/alexander/alexander3.jpg 25 August 2020); on right, Bull's Mouth Pass as it appears today, showing the accuracy of Alexander's sketch (source: photo by Rob Brett, February 2017).



The following day (31 March 1837), whilst settling for the night 'beside a pool of the Chuntop' 'an alarm of a rhinoceros near the wagon' led to a hunt: the rhinoceros was *becrept* (stalked), and 'unconscious of danger, ... quietly eating from a bush' was shot with 'three balls through the backbone and jaw' (Alexander 2006[1838] vol. 2: 11). The animal was a female with 'two perfect horns of equal length', and when butchered they found inside 'a foetus the size of a pig a month old' (Alexander 2006[1838] vol. 2: 12).

Rookmaaker argues that the skull of this rhino hunted by Alexander's party may have eventually found its way to the Museum of the Senckenbergische Naturforschende Gesellschaft in Frankfurt (Rookmaaker 2007: 107). The provenance of the *Diceros bicornis* skull in Figure 4 has the label *Rhinoceros africana* and was donated by William Ogilby (1807-1873), the Secretary of the Zoological Society of London who catalogued Alexander's collection, sorting his two collected rhino skulls into '*Rhinoceros africanus*' and '*Rhinoceros simus*'. If this rumination is correct then (rather incredibly) the skull depicted in Figure 4 below might be the skull of the very rhino whose hunt Alexander depicts so vividly in his narrative to no doubt fuel the imaginations of other 'big game hunters' in years to come.

Figure 4. 'Skull of *Diceros bicornis* donated by William Ogilby to the Museum of the Senckenbergische Naturforschende Gesellschaft in Frankfurt am Main (no. 699)' (source: Rookmaaker 2007: 107).



A number of Alexander's interactions with local people encountered during his 1836-37 journey through southern and central Namibia indicate that they too were very accustomed to living alongside, encountering and hunting rhino. South of 'Bull Mouth's Pass' a man in 'a party of Boschmans on the move (two men, six women, six children)' thus responded to the question of 'what he most wished for in the world' that this would be 'the rhinoceros, and to get it easily' (Alexander 1838 vol. 1: 287-288). Later, after time spent at Walvis Bay, probably at Sandfontein / #Khîsa||gubus, Alexander meets 'Quasip', the chief of 'the bay people' at nearby Rooibank / |Awa!haos on the !Khuseb River: Quasip¹⁷ was returning to the bay from inland and reports that 'some distance up the Kuisip, we should fall in with plenty of rhinoceroses, and also obtain other game to support us' (Alexander 1838 vol. 1: 287-288). As Alexander's party travelled eastwards from Walvis Bay via Onanis (#Ō!nanis) they encountered black rhino multiple times, contributing the cluster of observations on Figure 2 in the upper 'Kuisip' river and the Gamsberg (which Alexander calls 'Tans Mountain, the inverted comma signalling the click consonant in its Khoekhoegowab name, i.e. #Gāns).

It is again clear from Alexander's 1838 account that rhinos were not hunted for trade in their horn as a high-value commodity. Instead it was the meat and hides that tended to be in demand (Rookmaaker 2007: 109). Francis Galton (British explorer), travelling east from Walvis Bay in 1850-1851, later writes of how he preferred rhino meat 'to the flesh of any other animal, especially if it was young, rolled in a piece of spare hide and baked in the earth' (Rookmaaker 2007: 109 after Galton 1853: 275). Nonetheless, enjoyment of the 'sport' of hunting, as well as collecting natural history specimen-trophies for exhibiting in collections in Europe, became increasingly sought after by European actors in their variously combined activities as explorers, hunters, traders and missionaries. A couple of decades later still, James Chapman, a South African born in the Cape – described as 'a naturalist, not by education, but decidedly by inclination' – makes multiple references 'to rhinoceros, both black and white' (Rookmaaker 2007: 132). He carried a stereoscopic camera to Lake Ngami in 1859-1860, reportedly taking the first photograph of a black rhino, and his diaries record that encounters with rhino were frequent (Rookmaaker 2007: 132-133). Likewise, the Wesleyan missionary Joseph Tindall, stationed in Gobabis in 1846, reported that rhino were common, writing that 'over 40 had been shot in a few months', of two different species with different temperaments (Rookmaaker 2007: 115-116).

¹⁷ Perhaps Alexander is referring here to a Topnaar 'captain' known as 'Khaxab': from the Swakop River mouth 'Topnaar' migrating south from Kaokoveld 'spread further south and were allegedly led by their captain Khaxab [|Kaxab in Moritz 1992: 5] to one place #Kisa-lguwus commonly known as Kuwis or Sandfontein, located about three miles from the coast and settled south of what is now Walvis Bay' (Köhler 1969: 106). 'Khaxab' was a Topnaar chief into the 1840s (J.H.A. Kinahan 2000: 18) who in the mid-1840s entered an alliance with the Oorlam leader Jonker Afrikaner 'who became overlord of the Topnaar and appointed them his agents to sell cattle for arms' (J.H.A. Kinahan 2017: 303 after Vigne 1994: 7), placing Jonker in control of the trade route between Walvis Bay and Lake Ngami in present-day Botswana, from which the Oorlam Namas levied heavy tolls over the next 30 years. In 1846, Khaxab remained the captain at #Kisa-lguwus / Sandfontein (where he was also encountered by Francis Galton and Charles John Andersson in 1850 – J.H.A. Kinahan 2000: 18, after Andersson 1967[1861]: 23), whilst a Rhenish missionary station (Scheppmansdorf) was established at nearby Rooibank / |Awa!haos (Köhler 1969: 108). In 1852 Khaxab and other Topnaar leaders were reportedly forced by Jonker Afrikaner to leave the lower !Khuseb and to move to highland areas inland with apparently some 300 Topnaar Nama leaving the area 'to follow the call of Jonker', although returning soon after (Köhler 1969: 110). A full iteratively updated literature review for the !Khuseb area is linked online at <https://www.futurepasts.net/khuseb-historical-habitation>.

This slaughter of rhino and other animal species in the Gobabis area continued for some years, involving European actors and African pastoralists alike, whose ability to impact animal populations was significantly enhanced by firearms. In a well-known account from August 1851, for example, Francis Galton and Charles John Andersson (Anglo-Swede explorer, collector and trader) find the Khaus (Kailkhaun) Nama leader Amiral [Amraal] Lambert at Elephant Fountain [i.e. Gobabis] with

about forty men, who had just arrived *en route* for a shooting excursion to the east. They take their waggons with them for some days, and then make an encampment, whence they journey short distances on ride-oxen, and shoot what they can, bringing the meat back jerked to the waggon. It was delightful to hear people talk familiarly of the rhinoceros as an everyday kind of game, and we longed for a raid upon them. ... On the last shooting excursion Amiral's men had "bagged" forty of them. ... [travelling east] we arrived at the first great shooting place. ... Rhinoceros skulls were lying in every direction, but strangely enough only one spoor could be seen. ... [further east still] a rhinoceros, a lion, a hyena, and a gnu were "bagged". (Galton 1890[1853]: 158, 164)

Rhino presence after colonisation

Fast forwards several decades, through Namibia's ferociously turbulent colonial history that violated Africans and wildlife alike in the course of appropriating land for European ranches and farms, it is clear that this ubiquity of rhino in southern and central Namibia had been largely destroyed through hunting by diverse men with firearms. These circumstances clarify that claims that 'the devastation of Africa's wildlife from hunting has little to do with colonization' (Bodasing 2019: 203) are substantively inaccurate, at least for this context. Nevertheless, the new post-World War 1 Resident Commissioner of Owamboland, Major Charles N. Manning, frequently reported signs that rhinos were 'plentiful' as he journeyed through the north-west of the country to disarm and create administrative order of native populations there. This was apparently the case, even though the area had been subjected to significant hunting pressure from especially hunting parties of Trek Boers¹⁸ settled in southern Angola (Joubert 1984: 12; Bollig and Olwage 2016). At 'Koandimwa', north of Sesfontein (!Nani|aus / Ohamuheke) in today's Kunene Region, Manning notes the '[r]emains of summer cattle posts of nomadic Ovathimba. No inhabitants now', and writes of 'constant indications rhinoceros, viz. spoor and parallel lines dug in ground with horns or feet. Every few hundred yards new signs of rhino'¹⁹. In the early 1950s, at a time when the Omaruru River formed the boundary of the 'Police Zone' in the west of the country and all travel north of here required a permit, Anglican Rector Frank Haythornthwaite also reported the spoor of rhino in the Ugab River. Visiting Brandberg West Mine located in his parish,

¹⁸ In the wake of the abolition of slavery in the 1830s and the new freedoms of 'coloured' peoples of the Cape (under Ordinance 50 of 1828), several thousand 'Trek Boers' 'abandon[ed] their farms and settlements in the Cape to embark on their famous Great Trek': some pushed into Nama lands south of the Orange / Gariep River, contributing to movement of Nama northwards over the Orange (Olusoga and Erichsen 2010: 23); others moved east to the Transvaal, and in the 1870s trekked west across the Kalahari towards present-day Grootfontein in Namibia, and thence to north-west Namibia and southern Angola (Rizzo 2012: 37).

¹⁹ Manning Diary Notes 19 August 1917 and Manning Report 1917: 10. NAN SWAA 2516 A552/22 Kaokoveld, Major Manning's Report, 1917, with additions made from extracts of his diary.

which at the time reached from Walvis Bay *All the Way to Abenab*, as his memoir is called, he writes:

[o]ccasionally a solitary rhino will go by, bound for open water up or down the river. Rhinos love trekking in this manner. I do not know of anyone who has actually seen rhino go by since the pumps have been put in, but spoor has been seen. With no needs to rustle, a rhino would go quietly by. (Haythornthwaite 1956: 105)

As is well-known, however, these remaining populations of rhino in the remote and rugged landscapes north of the Ugab River themselves came under severe threat in the decades that followed. Already in the mid- to late 1960s it was reported that,

[t]he situation with regard to rhino is much more critical than is generally expected. The distribution of the black rhino, which used to occur throughout most of Suidwes²⁰, is limited to the northwest corner. The total population of black rhino in 1966 was ninety animals. What was also disturbing, however, is the spread of these animals. Only 17 percent were within the amended limits of the Etosha National Park as suggested by the Odendaal Commission [which moved the short-lived coastal boundary in the west eastwards to the Park boundary's present position²¹]. The other 83 percent were on private land or in communal or intended communal territories. It was clear that drastic steps were needed to ensure its survival.²² (Joubert 1984: 12)

This conservation concern regarding the presence of rhino outside formally protected areas led to some 55 rhino being translocated to Etosha National Park from the west by the newly created Game Capture Unit (established in 1966) from 1967 into the early 1970s: an impressive translocation effort with five animals lost in this process overall (Joubert 1984: 14).²³ In 1971 the former South West Africa's first Director of Nature Conservation and Tourism – Bernabé de la Bat – reportedly told honorary game wardens of South African Air Force (SADF) officers shooting wildlife from airplanes (Botha 2005: 180). In the early 1970s, the late Garth Owen-Smith, having worked from 1968-1970 as an Agricultural Official for the Kaokoveld Territory, wrote that '[t]he black rhinoceros appears to be decreasing on the plateau [inland], but it is still relatively common in the escarpment mountains and on the semi-desert plains [to the west]' (Owen-Smith 1972: 33).

In especially the 1970s and 1980s, a toxic combination of war, availability of firearms, and a multi-year drought conspired to create targets of the wildlife of the north-west, including the remnant population of black rhino sustained on these communal lands (Reardon 1986; Owen-Smith 2010). Severe drought from 1979-1982 decimated wildlife and livestock in north-west Namibia, making indigenous fauna 'vulnerable to subsistence hunting by the now

²⁰ After the overthrow of German colonial rule of 'Deutsch Südwestafrika' following World War 1, and prior to the formalisation of the name Namibia with independence in 1990, the territory was known by the names Suidwes-Afrika (Afrikaans) and South West Africa (English).

²¹ For a short period the boundary of Etosha National Park extended along the Ugab River to the coast (from 1958), was then moved north to between the !Uniab and Koigab Rivers for a brief moment from 1967 to 1970 (Tinley 1971), the westwards boundary being moved to its present position in 1970. From 1907 until 1958 the western boundary of the park instead stretched north-west to encompass northern Kaokoveld. (Berry 1997; Dieckmann 2007: 76; Miescher 2012: 170).

²² Author translation from Afrikaans, with the help of Deepl Translate.

²³ Hearn (2003: 8) writes that 56 rhino were moved into Etosha from 1968-1973.

impoverished Herero and Damara inhabitants in the region’, as well as to ‘[h]unting by government officials, the SADF and other non-residents’ (Owen-Smith 2002: 2, 8). Simultaneously, the opening into Kaokoveld of a western front to the growing independence war between the South West African People’s Organisation (SWAPO) and the South African government, led to a reversal of Manning’s earlier attempts to control the availability of firearms in the north-west when .303 rifles were issued by the SADF ‘to several thousand Kaokoland men’ (Jacobsohn 1998[1990]: 45). The intention ostensibly was for the pastoralists of the north-west to be able to protect themselves and their families from SWAPO insurgents, an initiative that amplified both animosities between different ethnicities and local hunting (Reardon 1986). By now rhino horn had also become a high-value consumer commodity (Rachlow *et al.* 1993), sought after by elite and local hunters alike and contributing to a reported decline in black rhino in Africa overall from 65,000 in 1970 to below 2,300 in 1993.²⁴

This combination of 1960s-1970s rhino translocations away from the west, and the devastating effects of war, drought and hunting on black rhino populations in the 1970s and 1980s, meant that by 1984 there were approximately 300 black rhinos (‘conservative estimate’) in ENP but ‘only 46 black rhinos [‘[a]ccording to reliable information’], in South West Africa beyond the borders of Etosha’ (Joubert 1984: 14). Thus, whilst the total number of black rhino in the territory had tripled since 1966, 85% of the population at this time was within the boundaries of Etosha National Park (Joubert 1984: 14). This pattern seems to be something of a reversal of what is known of the past distribution of *D. bicornis bicornis* in north-west Namibia, wherein rhino were rarely encountered in the vicinity of the present-day Etosha National Park. The first Europeans to apparently reach the pan in 1851 (Francis Galton and Charles John Andersson) reported few (if any) rhino in the northern areas through which they travelled (Galton 1852, 1890[1853])²⁵. Joubert (1971: 36) echoes this observation, reporting that ‘[a]ccording to the old Heikum [Hailom] Bushman now resident at Okaukeujo in ENP, no rhino were ever known to them or their fathers to have occurred in their old hunting grounds to the near west and south of the Etosha pan’: perhaps due to lack natural waterholes prior to the man-made boreholes which now support indigenous fauna in Etosha National Park. The already reduced western rhino populations remained under attack, with, for example, a Rehoboth resident shooting five rhinos in the former Damaraland ‘Homeland’ (two in the Palmwag Concession) in 1989 (Owen-Smith 2002: 7). These pressures precipitated a controversial dehorning programme: in the same year, then Senior

²⁴ <https://rhinos.org/2019-state-of-the-rhino/> last accessed 12 September 2020, link archived at <https://web.archive.org/web/20200814131014/https://rhinos.org/2019-state-of-the-rhino/>, 13 December 2021.

²⁵ Also compare the information in the two maps linked below, which indicate areas of historical travel where rhinos do not appear to have been encountered:

1) <https://www.futurepasts.net/historical-references-rhino-namibia> records historical encounters with rhino (as per Figure 2);

2) <https://www.etosha-kunene-histories.net/wp4-spatialising-colonialities> spatialises observations from the journeys of historical travellers who kept journals of their observations.

Note that this mapping of historical references is ongoing. It is possible that further literature review may clarify more historical records of encounters with rhino elsewhere in Namibia (for example in the north-east of the country). As it stands, there appear to be large areas of the territory travelled through historically where no rhino were encountered, plus other areas of dense encounters with rhino where none or few were found at independence in 1990.

Nature Conservation Officer Rudi Loutit and Department of Nature Conservation vet Pete Morkel undertook ‘the first ever de-horning of wild rhino in vulnerable areas south of the cordon [vet] fence’, and ten rhino were reportedly also translocated to Waterberg Plateau Park (Owen-Smith 2002: 7).

This specific set of patterns and pressures regarding the distribution of Namibian black rhino in the late 1970s and early 1980s prompted formation of the Namibia Wildlife Trust following which Namibia’s ‘Save the Rhino Trust’ was established by especially the late Blythe Loutit and the late Ina Britz (Clements *et al.* 1984; Reardon 1986; Hall-Martin *et al.* 1988). A non-militaristic Auxiliary Game Guard system operating in conjunction with government patrols in areas of settlement and pastoral land-use in north-west Namibia also helped improve circumstances as the 1979-1982 drought broke and hostilities involving South Africa, Angola and Namibia ceased in the late 1980s (Berger *et al.* 1993: 923; Rachlow *et al.* 1993: 23). As the late Mike Hearn writes,

[f]ocusing on the charismatic megafauna, a community-based conservation approach in the early 1980s was balanced by intensive field operations and strong law enforcement carried out by both government and non-governmental organisations. These measures greatly reduced poaching and contributed to wider biodiversity conservation objectives. (Hearn 2003: 1)

3. Black rhino custodianship across freehold and communally-managed lands: post-independence opportunities and challenges

This historical narrative draws out several key and interconnected issues underlying black rhino conservation in west Namibia today. The ferocious impacts of hunting with firearms on an unsuspecting and slow-reproducing species from the late 1700s onwards led to present circumstances of remnant black rhino populations concentrated in remote and inaccessible areas that are challenging to monitor and patrol. The parallel historical marginalisation of Namibia’s autochthonous peoples and resultant economic vulnerability, combined with structural inequality and promoted desires for perhaps unattainable levels of consumerism, potentially cloaks access to the ‘new gold’ of rhino horn with the seductive allure of a quick solution to personal poverty²⁶. In combination, all these factors make the continued, but vulnerable, conservation of black rhino in the communal area conservancies and tourism concessions of west Namibia even more exceptional. The ongoing presence and recovery of black rhino populations here (Brodie *et al.* 2011) is testament to the work and vision of a series of highly committed local people, individuals leading and working for non-governmental organisations (NGOs), long-term donors and government agencies. In this section we briefly consider some successes and challenges of three main approaches characterising Namibia’s present-day ‘custodianship’ model of rhino conservation: the translocation of individual animals for custodianship on land under freehold tenure beyond formally conserved areas; the extension of this custodianship model of translocations to

²⁶ As depicted for west Namibia in the 2019 Namibian film *Baxu and the Giants* <https://www.baxuandthegiants.com/>.

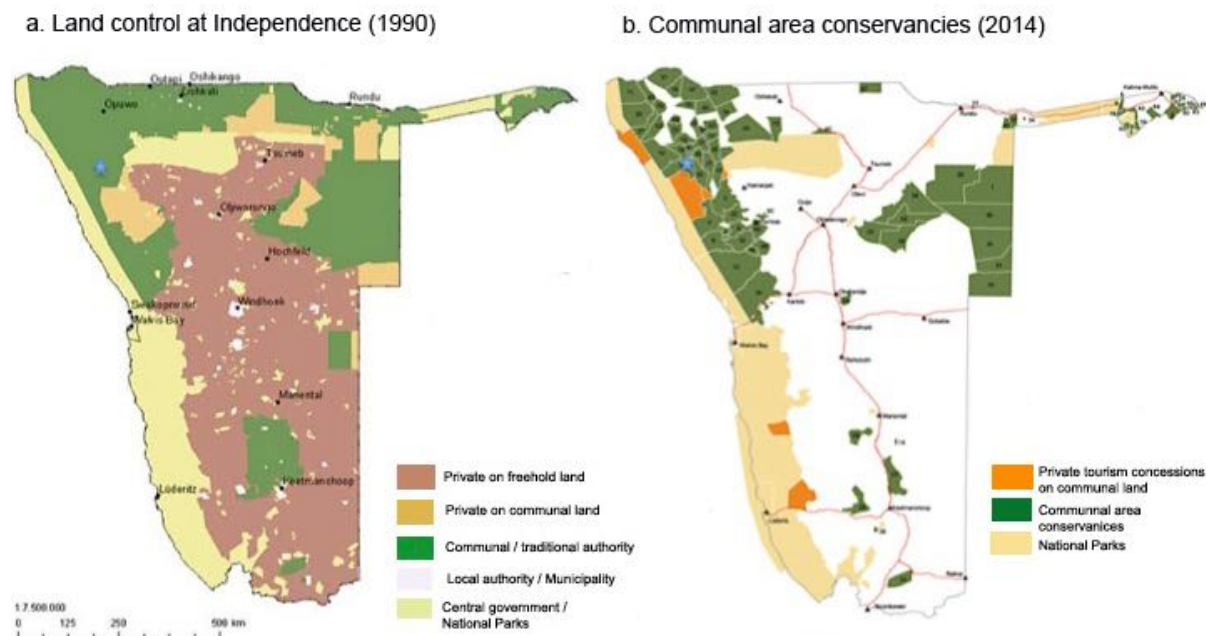
conservancies on communally managed land; and the *in situ* and dynamic evolution of community engagements with rhino conservation in Namibia's north-west, where black rhino, whilst at times severely threatened, has sustained a continuous presence despite their catastrophic historical decline elsewhere in Namibia.

First, however, it is important to place these circumstances within the context of the particularities of land distribution and tenure in Namibia. In this country an enduring division between areas under freehold tenure and areas remaining as 'communal land' is an outcome of Namibia's specific recent historical circumstances. This history effected a split between surveyed freehold farms allocated to settler farmers by the country's German colonial and South African apartheid governments, separated from areas forming so-called 'Native Reserves' and 'Homelands' where peoples autochthonous at the advent of colonial rule were constrained to live. It is these latter areas that have remained under communal forms of tenure and management (Werner 1993; Sullivan 1996, in press; Hearn 2003: vi; GRN 2020; Odendaal and Werner 2020). Today, this split is becoming refracted in various ways: for example, through the redistribution of freehold land to black Namibian commercial farmers, as well as to disadvantaged communities as resettlement farms. Sometimes the latter may be entangled in unintuitive ways with rhino conservation. In 1993, for example, a prominent Gobabis rancher in the Omaheke was reportedly 'caught in a police sting operation in South Africa with forty-two elephant tusks and six rhino horns', and one of the three farms he sold so as to pay his fine was Skoonheid which became a resettlement farm for Ju|'hoansi Sān (Suzman 2017: 59). In remaining communal areas, a broader movement towards Community-Based Natural Resources Management (CBNRM) with livelihoods incorporating the sustainable use of conserved and variously commodified wildlife has encouraged the establishment of some 86 registered communal area conservancies, encompassing more than 200,000 people (MET/NACSO 2020; Lendelvo *et al.* 2020). Nonetheless, and as shown in Figure 5, it is noticeable that today's communal area conservancies remain largely constrained to communal lands as designated in Namibia's colonial and apartheid pasts, signaling ongoing structural marginalisation of residents of these areas.

This situation is both ameliorated and compounded by a predominant policy approach to conservation that emphasises values accruing from commercially marketable 'sustainable utilisation'. Given that the greatest payments for wildlife and natural products consumption now arrive via international markets, it is these markets that are shaping commodifications of Namibia's landscapes, cultures and wildlife. A disconcerting outcome is the phenomenon of sustained – perhaps even deepened – inequality and dependency, alongside the creation and production of new monetary values through conservation (Kalvelage *et al.* 2020; Hewitson and Sullivan 2021; Thomsen *et al.* 2021). Wealthy international consumers increasingly access conservation businesses in communal areas invested and managed by agents external to these areas, generating conservation-related income of which some remains locally but much travels away from communal area conservancies themselves (Hoole 2010; Kavelage *et al.* 2020). The ongoing COVID-19 pandemic has drawn into focus some vulnerabilities of these dependencies. Travel bans and other regulations impacted on the ability of Namibia's communal area conservancies to receive the tourists on which the CBNRM / sustainable use

model largely relies; whilst enhanced awareness of interconnections between air travel, climate change and the habitat disruptions contributing to the pandemic makes promotion of international travel as the mechanism for sustaining conservation-linked livelihoods increasingly paradoxical (Lendelvo *et al.* 2020).²⁷ This situation, wherein Namibian conservancies are simultaneously radically progressive devolved resource management institutions *and* structures that leverage wildlife value for significant extra-local gain, is relevant for understanding the broader successes and challenges of Namibia’s Black Rhino Custodianship Programme today.

Figure 5. Pattern of land control in Namibia: a) showing areas under private and communal tenure (the pink and green coloured areas respectively) (adapted from ACACIA Project E1 2007 online http://www.uni-koeln.de/sfb389/e/e1/download/atlas_namibia/pics/land_history/control-over-land.jpg); b) showing the area administered in 2014 as communal area conservancies (in green). (NACSO, Windhoek, see <http://www.nacso.org.na/conservancies>). The blue asterisk on each map marks the municipality of Sesfontein / !Nani|aus / Ohamuheke. Source: Sullivan 2018a: 7.



Inaugurating black rhino custodianship

Namibia’s Black Rhino Custodianship Program began on 14 April 1993, ‘when the first six animals [from national parks] were translocated to a freehold farm under a Memorandum of

²⁷ Nb. some conservation financing initiatives prior to the COVID pandemic also sought to develop non-tourism sources of income for community-based conservation. A recent example is the production of 1,000 limited edition Namibian Rhino Gold Bars from Canadian corporation B2 Gold’s Otjikoto Mine in north-central Namibia, whose sale has generated \$1,7 million of which \$230,000 has been disbursed to rhino conservation activities; leading to B2 Gold Corp.’s CEO being named as CEO of the Year in 2020 by Kitco, the global retailer of precious metals and bullion, which has made an additional in-kind donation to Save the Rhino Trust (see <https://www.b2gold.com/responsible-mining/rhino/project-to-date/>, accessed 13 December 2021). Clearly these funds are immensely important for the day-to-day operational costs of rhino conservation activities in Namibia, although others might be less sanguine about the long-term implications of underwriting conservation on communal lands through corporate mining finance.

Understanding signed by the farmer and MET [then MWCT]' (unless otherwise stated, all direct quotes and information in this subsection come from Kötting 2020: online). On 29 July five more black rhino were moved to a second farm, these two farms having a combined area of 29,300 hectares (72,400 acres).²⁸ Originally formed to support black rhino protection on commercial farms under freehold tenure, and as Kötting (2020: online) clarifies,

[t]he concept of the Black Rhino Custodianship Program [BRCP] is that breeding nuclei of the animals be relocated as free-ranging populations to suitable habitat on farmland and communal conservancies where the landholders are willing and able to undertake the responsibility of providing basic care and security to them.

Other prerequisites for the BRC Program are that the applicant must be a bona fide landowner; the property must be appropriately fenced for black rhino²⁹; the property must be at least 10,000 hectares (24,710 acres) and financially sound; and the applicant must be willing to enter into a Memorandum of Understanding with the Ministry of Environment and Tourism [covering ownership, care, monitoring, research and filming, etc.].

Applying properties are assessed and scored 'by senior MET officials and the Protected Resources Division of the Namibian Police'. The programme seeks to re-establish black rhino throughout the former range of this species in Namibia. For example, in 2009 the then MET established 'two rhino populations in much more arid southern Namibia – one group at the Fish River and one at the Orange River' (although 'a previous attempt to re-introduce rhinos to the south, in Naute Game Park, had failed'), requiring 'lengthy boma (corral) training in Etosha National Park as well as at the receiving farms'. By 2020 'the black rhino population at the Orange River is hugely successful, having increased to 11 animals from four (two bulls and two cows)' although 'the Fish River rhinos have not done so well': most of these animals came from Etosha National Park and have 'learned to eat the toxic euphorbias of southern Namibia'. The success of the programme from a species conservation perspective can be seen in the growth rate for black rhino in the BRCP of 8.1% in 2017 (against a Namibian national growth rate of 6%), although this fell to 7.6% in 2018 due to increased illegal hunting, illustrating the ongoing challenges of conservation praxis regarding this species. Nonetheless,

[t]he long-term average growth rate for the custodian metapopulation—that is, our 560 black rhinos on [freehold] custodial properties—stands at 8.7%, from 1994 to 2019. (Kötting 2020: online)

Slightly updated figures for the end of 2020 indicate that the total number of black rhinos held by freehold custodians was 572 and average growth rates of the freehold metapopulation over 24 years from 1993-2020 were 7.9% (net of translocation) and 8.5% (net of both translocation and poaching).

²⁸ White rhinos are not part of the custodianship program because they can be privately owned whilst black rhino are state-owned (Kötting 2020).

²⁹ This requirement applies to freehold properties only, with Nature Conservation Ordinance 4 (1975) regulations stipulating the form (in terms of strands and heights) needed for keeping rhino within a property for both privately owned white rhino and state owned black rhino. Communal area conservancies have to remain unfenced and in some cases exceptions to the fencing requirement are also made for free-hold Custodians (for example, to facilitate dispersal).

In keeping with Namibia's conservation paradigm of 'sustainable use', a key – if controversial – form of income generation is via rhino 'conservation hunting': older bulls in the post-reproductive phase may be allocated for conservation hunting through the sale of a hunting permit, the rationale being that these animals may in any case be terminally injured as they are displaced by younger bulls who take over their territory. Although auctioned permits to hunt black rhino have achieved in the order of US\$350,000 per permit (Herskovitz 2014), a portion of which is directed to Namibia's Game Products Trust Fund to 'ensure revenue is directed toward conservation' (US FWS n.d.: online), contestation over this utilitarian conservation choice may pose reputational risk (Hannis 2016). As Kötting (2020: online) also writes, 'the scale of program costs versus the potential for recovery through hunting is a considerable challenge and other means of creating revenue must be explored ...'.

From freehold farms to communal area conservancies

In 2003 the Namibian Ministry of Environment and Tourism's (MET, now Ministry of Environment, Forestry and Tourism, MEFT), moved to extend the BCRP into Namibia's remaining communal areas, through a series of strategic translocations of animals to areas of its former habitation in conservancies in the north-west of the country. The BCRP thus became officially extended to communal area conservancies in April 2004, when the first conservancy joined the programme, with several other conservancies 'in the remote Kunene region of northwest Namibia' (see Figure 6) also later joining the programme to take in rhinos 'from the free-roaming Kunene population' (Kötting 2020: online). In some cases, translocations complemented the established presence of conservancies in the black rhino range. In 1998, for example, Torra Conservancy in southern Kunene became the first conservancy located in extant black rhino range, also achieving financial self-sufficiency through a lucrative tourism joint venture with luxury tourism company Wilderness Safaris³⁰ that is not disconnected from the presence of rhino (Humphrey and Humphrey 2003).

Translocations were preceded by in-depth research exploring local perceptions of and attitudes towards rhino amongst inhabitants of southern Kunene faced with the reintroduction of this species to areas of its former habitation (Uri-khob 2020[2004]). At this time, around 6,000 people were living 'close to the rhino range, dispersed in small villages and at natural water points occurring on the periphery of the rhino range' (Hearn 2003: v). Following discussion with community leaders during a stakeholder workshop in 2004 (DICE 2005), tourism opportunity was foregrounded as the driving rationale for translocations and reintroductions of over 40 black rhinos from their core habitat in the Palmwag Concession Area into historical rangelands across Kunene Region, between 2005 and 2010 (Uri-khob *et al.* 2010). Such translocations are not without risks. In 2010, for example, the then MET tried to 'relocate black rhinos to communal conservancies in the arid extreme northwest of Namibia, but these attempts failed, most likely because of the competition from community

³⁰ <https://wilderness-safaris.com/>

livestock around water points, which caused the rhinos to wander in search of less disturbance’ (Kötting 2020: online).³¹

Figure 6. Boundaries of current tourism concessions, surrounding communal area conservancies and state protected areas in southern Kunene Region, west Namibia. Source: drawn by Jeff Muntifering, 2 October 2019.



In 2014, a ‘sudden escalation of rhino poaching in northwestern Namibia’ led to a government decision ‘to dehorn all state-owned rhinos’ (Kötting 2020: online). A consolidated police presence was brought into rhino patrolling in the north-west (Schneider 2021). Recent research also brings awareness to a misalignment between local people and non-local conservation practitioners regarding societal drivers of syndicated poaching and its connection with local dissatisfaction with the conservancy employment and benefit

³¹ The rhino reintroduction failure in Orupembe, north-west Kunene Region, was also likely a result of rushed, and inadequate preparation, as opposed to previous reintroductions on southern Kunene Region conservancies which followed detailed research and awareness building with conservancy communities (!Uri#khob 2020[2004]). For the Orupembe case, a few local interviews were carried out by students but these were seven years before the actual reintroduction.

distribution systems (Naro *et al.* 2020). Nonetheless, the extension of the rhino custodianship policy into areas under communal tenure demonstrates the Namibian government's willingness to share key values running through the BCRP around power and the devolution of decision-making, and the sharing of both co-management roles and income generated through emerging rhino tourism initiatives (Muntifering *et al.*, 2017; Kötting 2020, online).

Kötting (2020: online) sums up the achievements and challenges of the Namibian custodianship conservation model, from a devolved species conservation perspective:

27 years after the first animals were translocated, 35 land units are part of the Black Rhino Custodianship program – 25 commercial farms or game ranches and 10 communal conservancies. The 25 freehold custodians, plus one core area in a conservancy, cover an area of 769,000 hectares (1.97 million acres) and the nine Kunene [Region] conservancies cover a combined area of 2,674,100 hectares (6.61 million acres). The custodianship program presently hosts an estimated 560 black rhinos on freehold land and a further 150 in conservancies.

Over the years, nine freehold custodians and one communal custodian have exited the program for various reasons, resulting in a loss of more than 85,000 hectares (210,000 acres) of prime habitat for rhino conservation in the private sector, which potentially could have accommodated more than 150 rhinos. The impact of habitat loss on conservation remains a threat of immeasurable magnitude, and it is no different for the black rhinoceros. Losing custodians should therefore be avoided at all costs, if possible. Remarkably, and regrettably, no financial support was ever available to assist custodians, even in providing security, which is very costly. This is testimony to the commitment to conservation of the participants in the program ... we currently have just over 2,000 black rhinos in Namibia, with approximately 1,500 in the rest of the country (at Etosha National Park and other smaller parks) [i.e. beyond the custodianship programme].

Additional innovations

Today's proactive rhino monitoring and conservation work brings renewed efforts to consolidate and improve the values that local people gain from and attach to sustaining the black rhino (Naro *et al.* 2020). To date, this effort has largely focused on promoting increased ownership through the BCRP and enhanced livelihoods, through knowledge and skills transfer, and through job creation largely financed by conventional donor funds as well as prevailing tourism markets with enhanced visibility of incomes relating to rhino conservation. Amidst the challenging historical circumstances and structural inequalities outlined above, black rhino conservation in west Namibia provides opportunities for local employment via rhino tracking, monitoring, patrols and tourism, in ways that simultaneously co-opt and amplify local cultural connections with the area. The founders and associates of the black rhino monitoring NGO SRT in the early 1980s learned about the locations of springs in the north-west in part through knowledge shared by local inhabitants with deep knowledge of the area's geography and ecology, some of whom were recruited as trackers for this organisation. Given that a number of trackers and other employees of this organisation are from families with long histories of association with the area, their employment with SRT is now an important way that they can maintain connections with, and share knowledge about, the area (also see Sullivan and Ganuses 2021; Sullivan in press). SRT and associates thereby support continued relationship with land areas with which many employees, 'rhino

rangers' and their families have valued historical and cultural roots. Perhaps this is why an ongoing and unrelenting willingness and dedication is noticeable amongst men and women working together on the ground in north-west Namibia to ensure 'their' rhinos are safe from poachers.

In 2003 SRT developed a partnership with Wilderness Safaris to design and deliver a novel rhino tracking experience (Muntifering *et al.* 2019) that would also serve as a prototype (Muntifering *et al.* 2020) for expanding rhino tourism joint-ventures into communal area conservancies. More recently, in an attempt to combat the latest escalation in illegal hunting of rhino, conservancy leadership in the north-west requested NGOs (specifically SRT) to consider engaging and empowering a new generation of 'Conservancy Rhino Rangers' appointed by and accountable to them (the Conservancy), so as to help fulfil conservancy obligations to the government as Rhino Custodians. This initiative led to the establishment of the Conservancy Rhino Ranger Incentive Programme in 2012 (Rhino Ranger Incentive Programme 2014), and a shift of the rhino protection agenda from being government/NGO-based, towards a more community-led initiative with strengthened collaboration across multiple institutions and industries including government, NGO, private sector tourism and law enforcement (Muntifering 2019).

Since the COVID-19 lock-down measures and tourism restrictions took place in 2020, rhino monitoring effort – in terms of field days and foot kilometres – increased by 13% and 27% respectively, compared with the same period in 2019, and an all-time monthly rhino sighting record was achieved in July 2020 with 467 confirmed sightings.³² These figures were achieved against already record-breaking monitoring efforts in 2019 and despite COVID-19 related reductions in patrol food and delayed performance bonus payments, and zero tourism income. It appears that SRT trackers and conservancy rhino rangers not only continued their rhino monitoring work in these circumstances, but increased their efforts. Values beyond income are clearly at play here (cf. Pascual *et al.* 2021), demonstrating motivations for rhino conservation praxis that complexify 'sustainable use' models, even whilst affirming ethical imperatives linked with procedural and distributive justice (Martin *et al.* 2013).

Looking ahead, recent research indicates that rhino safari tourists appear willing to pay more for a greater share of any profits to be distributed to local communities, as well as a preference towards paying more for local rhino tracker involvement in rhino safaris (Naidoo *et al.* 2021). The COVID-19 pandemic, however, has now set in motion a need for tourism-reliant institutions to diversify income streams, a circumstance that may also help mitigate against tourism-related disturbances to desert-dwelling black rhino (Muntifering *et al.* 2020). Conservation financing models seeking to leverage multiple income streams from a diverse set of financing sources are now being developed to reduce dependence on touristic access. 'Wildlife Credits'³³, an initiative of Namibia's Community Conservation Trust Fund and the Namibian Association of CBNRM Support Organisations (NACSO), for example,

³² Unpublished data from SRT.

³³ <http://wildlifecredits.com/>

crowdfunds donations to support payments to communal area conservancies linked to conservation performance, including rhino sightings and monitoring. This initiative is mirrored by both smaller-scale and macro-level financing initiatives. ‘One Africa’³⁴, established by the Rust family Trust, thus similarly crowdfunds for members of the public to become ‘shareholders’ supporting conservation business, including rhino conservation, on its portfolio of four properties. As outlined in the opening to this chapter, and adding contextual complexity to conservation business on freehold land, these properties are constituted by lands removed historically from autochthonous Namibians at places such as Ghaub (!Gaub) and Waterberg (!Hōb/Omuvereoom), a process receiving renewed attention given recent publication of proposals for ‘ancestral land rights claim and restitution legislation’ by the government’s Ancestral Land Commission (GRN 2020). At a more ‘meta-level’, initiatives such as Credit Suisse’s Rhino Impact Investment Project directed specifically towards black rhino are intended to mobilise impact investing structures in a ‘payments for results financial instrument for the conservation of this critically endangered species’ (Credit Suisse 2021: online). Given propensities towards ‘green’ forms of land appropriations linked with making land and species ‘investable’ (Fairhead *et al.* 2012; Sullivan 2018a and b), as well as sometimes problematic speculative practices by institutions developing ‘green finance’ products (Denton 2021), vigilance is needed to prevent actual and/or perceived elite capture of lands for conservation through such ‘innovative financing mechanisms’ (Mbaria and Ogada 2016; Corry 2021).

Without downplaying the importance of distributive and procedural justice practices where income distribution and decision-making are concerned (Naro *et al.* 2020), or of the visibility of policing and patrolling in deflecting ‘wildlife crime’, we thus affirm that plural local values are at play in the successful sustenance of black rhino in Namibia’s north-western communal area conservancies. Research by !Uri#khob (2020[2004]) and Muntifering *et al.* (2017) clearly demonstrates local appreciation of *Diceros bicornis bicornis* in north-west Namibia, despite structural processes constraining the density of cultural meanings with which the landscapes of west Namibia have also been known (Sullivan and Ganuses 2021). That said, and although great effort has gone into establishing locally-run conservancies from which members can benefit from wildlife-related incomes, cultural and historical dimensions of land-use and value remain relatively weakly entangled with conservation concerns. More acknowledgement of cultural and historical dimensions of land-use and value might enable ‘cultural heritage’ and an appreciation of peoples’ pasts to be connected more strongly, and with mutual benefit, to contemporary conservation activities in the area (cf. Sullivan 2021b; Sullivan and Ganuses 2021). Bringing Article 19 of Namibia’s constitution on the right to culture into richer conversation with Article 95’s affirmation of the ‘utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future’ (GRN 2014[1990]), might perhaps nourish a modern echo of the plural values that seem caught by rhino depictions in the prolific and potent rock art of Namibia’s pasts.

³⁴ <https://one-namibia.com/en/>

4. Conclusion: pluralising rhino values and value relations?

In this paper we have reviewed colonial and recent historical circumstances contributing to catastrophic decline of black rhino in Namibia. We have set the species' present vigour in Namibia in the context of a post-independence model of conservation custodianship that works with different land tenure circumstances to produce positive species conservation outcomes. We have noted the compromises constantly being negotiated so that an internationally high-value and sometimes dangerous species with high management costs will remain and flourish into the future. In brief, it is extraordinary that black rhino are flourishing in Namibia, given: 1) the clearance of black rhino from most of its former range, as the colonial frontier – enabled by firearm technology – expanded erratically from the late 1700s; and 2) the concentration of both economically marginalised autochthonous Namibians and high-value black rhino in the relatively inaccessible, inhospitable and difficult to police landscapes of west Namibia.

Opportunities linked with conservation in the communal area conservancies and tourism concessions of Namibia's north-west are clearly also provided for many beyond-local others, including lodge owners, investors, tourists, trophy-hunters, tour guides and researchers, to name only a few. A significant challenge for the conservation of species and landscapes with high international value is to create non-exploitative relationships with local people whose long histories of association with the area have been marginalised. Consolidating ethical conservation-by-sustainable-use in such contexts also means creating structures whereby a greater proportion of generated value remains locally to be distributed transparently and equitably with the range of peoples whose cultural heritage is linked with contemporary conservation landscapes (Kavelage *et al.* 2020; Thomsen *et al.* 2021). The extreme inequalities in land distribution set in motion through Namibia's colonial and apartheid histories make it essential that conservation in communal area contexts is not only seen as simply another means of extracting value from rural Namibian localities, or of further constraining peoples' livelihoods and autonomy. As demonstrated in practice by Namibia's post-independence Black Rhino Custodianship Programme, the ongoing challenge is to find the right contextual mix of strategies that align and harness multiple values for this charismatic but threatened species, such that black rhino remain in their starkly beautiful desert home into the future, and local peoples continue to benefit from their value.

Acknowledgements and Disclosures

Sian Sullivan acknowledges research funding from the UK's Arts and Humanities Research Council (*Future Pasts*, AH/K005871/2, www.futurepasts.net and *Etosha-Kunene Histories*, AH/T013230/1, www.etosha-kunene-histories.net – Namibian National Commission on Research, Science and Technology Authorization AN202102038). She declares no personal competing interests. The remaining authors are all directly involved with rhino conservation and rural development activities linked with Namibia's Black Rhino Custodianship Programme, although declare no personal competing interests. Whilst interested in the Programme's success, they also are all intimately aware of the Programme's history, challenges and outcomes.

References

- Urikhob, S. 2020[2004] Attitudes and perceptions of local communities towards the reintroduction of black rhino (*Diceros bicornis bicornis*) into their historical range in northwest Kunene Region, Namibia: a Masters Dissertation from 2004. With a Foreword by Sian Sullivan and Jeff Muntifering, 'Historicising black rhino in west Namibia' *Future Pasts Working Paper Series* 8 <https://www.futurepasts.net/fpwp8-urikhob-sullivan-muntife-2020>
- Alexander, J.E. 2006[1838] *An Expedition of Discovery into the Interior of Africa: Through the Hitherto Undescribed Countries of the Great Namaquas, Boschmans, and Hill Damaras, Vols.1 and 2*. Elibron Classics Series, orig. published by London: Henry Colburn.
- Andersson, C.J. 1967[1856] *Lake Ngami or Explorations and Discovery During Four Years of Wanderings in the Wilds of Southwestern Africa*. Cape Town: Struik. Facsimile reprint of 1856 original.
- Berger, J., Cunningham, C., Gawuseb, A.A. and Lindeque, M. 1993 "Costs" and short-term survivorship of hornless black rhinos. *Conservation Biology* 7(4): 920-924.
- Berry, H. 1997 Historical review of the Etosha Region and its subsequent administration as a National Park. *Madoqua* 20(1): 3-10.
- Bodasing, T. 2019 Looking beyond the past to give African wildlife a future: a critical review of *The Big Conservation Lie*. *The Ecological Citizen* 2: 202-205.
- Bolig, M. & Olwage, E. 2016 The political ecology of hunting in Namibia's Kaokoveld: from Dorsland Trekkers' elephant hunts to trophy-hunting in contemporary conservancies. *Journal of Contemporary African Studies* 34(1): 61-79.
- Botha, C. 2005 People and the environment in colonial Namibia. *South African Historical Journal* 52: 170-190.
- Bradley Martin, E. and Bradley Martin, C. 1982 *Run Rhino Run*. London: Chatto & Windus.
- Brodie, J.F., Muntifering, J., Hearn, M., Loutit, B., Loutit, R., Brell, B., Uri-Khob, S., Leader-Williams, N. and du Preez, P. 2011 Population recovery of black rhinoceros in north-west Namibia following poaching. *Animal Conservation* 14: 354-362.
- Clements, B., Loutit, B., Owen-Smith, G. and Viljoen, P.J. 1984 A trust to fight for desert wildlife in Namibia. *Oryx* 18(4): 215-217.
- Corry, S. 2021 Are Kenyan Conservancies a Trojan Horse for Land Grabs? *The Elephant* 3 April 2021 <https://www.theelephant.info/culture/2021/04/03/are-kenyan-conservancies-a-trojan-horse-for-land-grabs/>
- Credit Suisse 2021 Life on land: forging new forms of conservation finance. *Financial Times*, online: <https://www.ft.com/partnercontent/credit-suisse/life-on-land-forging-new-forms-of-conservation-finance.html> 20 December 2021.
- Denton, J. 2021 Credit Suisse losses linked to Archegos fire sale hit \$4.7 billion, with executives to leave bank. *Market Watch* 6 April 2021 <https://www.marketwatch.com/story/credit-suisse-losses-linked-to-archegos-fire-sale-hit-4-7-billion-with-executives-to-leave-bank-11617700331> Accessed 7 April 2021.
- Dieckmann, U. 2007 *Hai||om in the Etosha Region: A History of Colonial Settlement, Ethnicity and Nature Conservation*. Basel: Basler Afrika Bibliographien.
- Du Pisani, A. 1986 *SWA/Namibia: The Politics of Continuity and Change*. Johannesburg: Jonathan Ball.
- DICE 2005 *Stakeholder Workshop on Biological Management Options for the Black Rhino in North-west Namibia*. Durrell Institute of Conservation and Ecology, University of Kent, unpublished final report to the Darwin Initiative.
- Fairhead, J., Leach, M. and Scoones, I. 2012 Green grabbing: a new appropriation of nature. *Journal of Peasant Studies* 39: 237-261.
- Ferreira, S.M. and Okita-Ouma, B. 2012 A proposed framework for short-, medium- and long-term responses by range and consumer States to curb poaching for African rhino horn. *Pachyderm* 51: 52-59.
- Galton, F. 1852 Recent expedition into the interior of South-Western Africa. *Journal of the Royal Geographical Society* 22: 140-63.
- Galton, F. 1853 *The Narrative of an Explorer in Tropical South Africa*. London: John Murray.
- Galton, F. 1890[1853] *Narrative of an Explorer in Tropical South Africa*. London: Ward, Lock and Co.
- Gewald, J.B. 1995 Untapped sources: slave exports from southern and central Namibia up to c. 1850, pp. 417-435 in Hamilton, C. (ed.) *The Mfecane Aftermath: Reconstructive Debates in Southern African History*. Johannesburg: Witwatersrand Press.
- GRN 2014[1990] *Namibian Constitution*. Windhoek: Government of the Republic of Namibia.

- GRN 2020 [Report of the Commission of Inquiry into Claims of Ancestral Land Rights and Restitution](#). Windhoek: Government of the Republic of Namibia.
- Green, L.G. 1953[1952] *Lords of the Last Frontier: the Story of South West Africa and its People of All Races*. London: Stanley Paul and Co. Ltd.
- Groves, C.P. and Grubbs, P. 2011 *Ungulate Taxonomy*. Baltimore: John Hopkins University Press.
- Haacke, W.H.G. 2018 Khoekhoegowab (Nama/Damara), pp. 133-158 in Kamusella, T. and Ndhlovu, F. (eds.) *The Social and Political History of Southern Africa's Languages*. London: Palgrave Macmillan.
- Hall-Martin, A., Walker, C. and Bothma, J. du P. 1988 *Kaokoveld: The Last Wilderness*. Johannesburg: Southern Book Publishers.
- Hanks, J. 2015 *Operation Lock and the War on Rhino Poaching*. London: Penguin Books.
- Hannis, M. 2016 [Killing nature to save it? Ethics, economics and rhino hunting in Namibia](#). *Future Pasts Working Paper Series 4* <https://www.futurepasts.net/fwp4-hannis-2016>
- Haythornthwaite, F. 1956 *All the Way to Abenab*. London: Faber & Faber Ltd.
- Hearn, M. 2003 *Assessment of Biological and Human Factors Limiting the West Kunene Rhino Population*. Report for the SADC Regional Programme for Rhino Conservation.
- Heawood, E. 1912 *A History of Geographical Discovery in the Seventeenth and Eighteenth Centuries*. Cambridge: Cambridge University Press.
- Herskovitz, J. 2014 Permit to hunt endangered rhino sells for \$350,000 despite protests. *Scientific American* 11 January 2014 <https://www.scientificamerican.com/article/permit-to-hunt-endangered-rhino-sel/>
- Hewitson, L. and Sullivan, S. 2021 Producing elephant commodities for 'conservation hunting' in Namibian communal-area conservancies. *Journal of Political Ecology* 28: 1-24.
- Hoole, A. 2010 Place – power – prognosis: community-based conservation, partnerships and ecotourism enterprise in Namibia. *International Journal of the Commons* 4: 78-99.
- Huigen, S. 2009 Trade and science: reports of the VOC expedition by Hendrik Hop from 1761–1762, pp. 75–91 in Huigen, S. (ed.) *Knowledge and Colonialism: Eighteenth-Century Travellers in South Africa*. Leiden: Brill.
- Humphrey, A. and Humphrey, E. 2003 *A Profile of Four Communal Area Conservancies in Namibia. Torra, †Khoadi-!Hóas, Mayuni, Salambala*. Report for the WILD project, MET, Windhoek, Namibia.
- Jacobsohn, M. 1998[1990] *Himba: Nomads of Namibia*. Cape Town: Struik.
- Jacobson, L. 1976 A critical review of the Damaraland Culture. *Cimbebasia* (B)2: 203-208.
- Joubert, E. 1971 The past and present distribution and status of the black rhinoceros (*Diceros bicornis* Linn. 1758) in South West Africa. *Madoqua* series 1, 4: 33-43.
- Joubert, E. 1984. Die swartrenoster: 'n suksesverhaal van bewaring in SWA. *Quagga* 7: 12-17.
- Kalvelage, L., Revilla Diez, J. and Bollig, M. 2020 How much remains? Local value capture from tourism in Zambezi, Namibia. *Tourism Geographies* <https://doi.org/10.1080/14616688.2020.1786154>
- Kinahan, J. 1980 Eighteenth century coppersmiths in central Namibia: comments on some sources and syntheses. *Namibiana* 2(2): 17-22.
- Kinahan, J. 2001[1991] *Pastoral Nomads of the Namib Desert: The People History Forgot*. Windhoek: Capital Press.
- Kinahan, J.H.A. 2000 *Cattle for Beads: The Archaeology of Historical Contact and Trade on the Namib Coast*. Uppsala, Dept. of Archaeology and Ancient History: Studies in African Archaeology 17.
- Kinahan, J.H.A. 2017 No need to hear your voice, when I can talk about you better than you can speak about yourself... Discourses on knowledge and power in the !Khuseb Delta on the Namib Coast, 1780-2016 CE. *International Journal of Historical Archaeology* 21(2): 295-320.
- Köhler, O. 1969 Die Topnaar Hottentotten am unteren Kuiseb, pp. 99-122 in *The Ethnological Section* (ed.) Ethnological and Linguistic Studies in Honour of NJ Van Warmelo. *Ethnological Publications* 52, Pretoria: Dept. of Bantu Administration and Development.

- Kötting, B. 2020 Namibia's Black Rhino Custodianship Program. *Conservation Frontlines* 2 April 2020
<https://www.conservationfrontlines.org/2020/04/namibias-black-rhino-custodianship-program/> (Accessed 3 December 2020)
- Leader-Williams, N. 1992 *The World Trade in Rhino Horn*. Cambridge: TRAFFIC International.
- Lendelvo, S., Mechtild, P. and Sullivan, S. 2020 [A perfect storm?](#) COVID-19 and community-based conservation in Namibia. *Namibian Journal of Environment* 4(B): 1-15.
- Lenssen-Erz, T. 2018 *Reading Rock Art With Indigenous Knowledge of San Hunters*. University of Cologne, unpublished report.
- Mackenzie, J.M. 1987 Chivalry, social Darwinism and ritualised killing: the hunting ethos in Central Africa up to 1914, pp. 41-61 in Anderson, D. and Grove, R. (eds.) *Conservation in Africa: People, Policies and Practice*. Cambridge: Cambridge University Press.
- Martin, A., McGuire, S. and Sullivan, S. 2013 Global environmental justice and biodiversity conservation. *The Geographical Journal* 179(2): 122-131.
- Mason, C.F., Bulte, E.H. and Horan, R.D. 2012 Banking on extinction: endangered species and speculation. *Oxford Review of Economic Policy* 28(1): 180-192.
- Mbaria, J. and Ogada, M. 2017 *The Big Conservation Lie*. Washington: Lens&Pens Publishing.
- MET/NACSO 2020 *The State of Community Conservation in Namibia (Annual Report 2018)*. Windhoek: MET/NACSO.
- Moodley, Y., Russo, I-R. M., Dalton, D.L., Kotzé, A., Muya, S., et al. 2017 Extinctions, genetic erosion and conservation options for the black rhinoceros (*Diceros bicornis*). *Scientific Reports* 2:41417 Doi: 10.1038/srep41417
- Moritz, W. 1992 *The Nara, Bread in the Desert*. Windhoek: Walter Moritz.
- Mossop, E.E. (ed.) 1935 *The Journals of Wikar, Coetsé and van Reenen*. Cape Town: The Van Riebeeck Society.
- Mossop, E.E. (ed.) 1947 *The Journals of Brink and Rhenius, being The Journal of Carel Frederik Brink of the Journey into Great Namaqualand, (1761-62), made by Captain Hendrik Hop, and The Journal of Ensign Johannes Tobias Rhenius (1724)*. Cape Town: The Van Riebeeck Society.
- Muntifering, J.R. (ed.) 2019 *Large-scale Black Rhino Conservation in North-West Namibia*. Windhoek: Venture Publication.
- Muntifering, J.R., Linklater, W.L., Clark, S.G., Uri-#Khub, S., Kasaona, J.K., Uiseb, K., Du Preez, P., Kasaona, K., Beytell, P., Ketji, J., Hambo, B., Brown, M.A., Thouless, C., Jacobs, S., Knight, A.T. 2017 Harnessing values to save the rhinoceros: insights from Namibia. *Oryx* 51(1): 98-105.
- Muntifering, J.R., Linklater, W.L., Naidoo, R., Uri-#Khub, S., Preez, P.D., Beytell, P., Jacobs, S., Knight, A.T. 2019 Sustainable close encounters: integrating tourist and animal behaviour to improve rhinoceros viewing protocols. *Animal Conservation* 22: 189-197.
- Muntifering, J.R., Clark, S.G., Linklater, W.L., Uri-Khub, S., Jacobs, S. and Knight, A.T. 2020 Lessons from a Conservation and Tourism Cooperative: the Namibian black rhinoceros case. *Annals of Tourism Research* 82
<https://doi.org/10.1016/j.annals.2020.102918>
- Naidoo, R., Beytell, P., Malherbe, A., Middleton, A., Perche, J. and Muntifering, J.R. 2021 Heterogeneous consumer preferences for local community involvement in nature-based tourism drive triple-bottom-line gains. *Conservation Science and Practice*
<https://doi.org/10.1111/csp2.425>
- Naro, E.M., Maher, S.M.L., Muntifering, J.R., Eichenwald, A.J. and Clark, S.G. 2020 Syndicate recruitment, perceptions, and problem solving in Namibian rhinoceros protection. *Biological Conservation* 243: 108481.
- Nyaungwa, N. 2021 Rhino and elephant poaching declines in Namibia. *Reuters* 26 July. Online, <https://www.reuters.com/world/africa/rhino-elephant-poaching-declines-namibia-2021-07-26/>, accessed 9 December 2021.
- Odendaal, W. and Werner, W. (eds.) 2020 *Neither Here Nor There': Indigeneity, Marginalisation and Land Rights in Post-independence Namibia*. Windhoek: Land, Environment and Development Project, Legal Assistance Centre.
- Olusoga, D. and Erichsen, C.W. 2010 *The Kaiser's Holocaust: Germany's Forgotten Genocide and the Colonial Roots of Nazism*. London: Faber and Faber.
- Owen-Smith, G.L. 1972 Proposals for a Game Reserve in the Western Kaokoveld. *South African Journal of Science* 68: 29-37.

- Owen-Smith, G. 2002 *A Brief History of the Conservation and Origin of the Concession Areas in the Former Damaraland*. <https://www.namibweb.com/conservation-areas-damaraland.pdf>, Last accessed 3 November 2020
- Owen-Smith, G. 2010 *An Arid Eden: A Personal Account of Conservation in the Kaokoveld*. Johannesburg: Jonathan Ball Publishers.
- Pascual, U., Adams, W.M., Díaz, S., Lele, S. Mace, G.M., Turnhout, E. 2021 Biodiversity and the challenge of pluralism. *Nature Sustainability* <https://doi.org/10.1038/s41893-021-00694-7>
- Pleurdeau, D., Imalwa, E., Déroit, F., Lesur, J., Veldman, A., Bahain, J-J, *et al.* 2012 Of sheep and men: earliest direct evidence of caprine domestication in Southern Africa at Leopard Cave (Erongo, Namibia). *PLoS ONE* 7(7): e40340. <https://doi.org/10.1371/journal.pone.0040340>
- Rachlow, J.L., Cunningham, C. and Berger, J. 1993 Horns today, gone tomorrow: is dehorning a realistic option? *Rhino and Elephant Foundation Journal* 1993: 22-30.
- Reardon, M. 1986 *The Besieged Desert: War, Drought, Poaching in the Namib Desert*. New York: Collins.
- Rhino Ranger Incentive Programme 2014 *Rhino Ranger Incentive Programme – 2014 Progress Report*. http://www.savetherhinotrust.org/uploads/4/5/0/5/45057859/rhino_ranger_2014_update.pdf Accessed 5 April 2021.
- Rizzo, L. 2012 *Gender and Colonialism: A History of Kaoko in north-western Namibia*. Basel: Basler Afrika Bibliographien.
- Rookmaaker, L.C. (Kees) 2007 A chronological survey of bibliographical and iconographical sources on rhinoceroses in southern Africa from 1795-1875: reconstructing views on classification and changes in distribution. *Transactions of the Royal Society of South Africa* 62(2): 55-198.
- Rudner, J. 1957 The Brandberg and its archaeological remains. *Journal of the SWA Scientific Society* 12: 7-44.
- Schneider, R. 2021 *The Inclusive Fortress: An Ethnography of Militarised and Community-Based Conservation in North-West Namibia*. Unpublished PhD Thesis, Sociology, University of Aberdeen.
- Sullivan, S. 1996 *The 'Communalization' of Former Commercial Farmland: Perspectives From Damaraland and Implications for Land Reform*. Windhoek: Social Sciences Division of the Multidisciplinary Research Centre, University of Namibia, Research Report 25.
- Sullivan, S. 2002 How sustainable is the communalising discourse of 'new' conservation? The masking of difference, inequality and aspiration in the fledgling 'conservancies' of Namibia, pp. 158-187 *In* Chatty, D. and Colchester, M. (eds.) *Conservation and Mobile Indigenous people: Displacement, Forced Settlement and Sustainable Development*. Oxford: Berghahn Press.
- Sullivan, S. 2018a Dissonant sustainabilities? Politicising and psychologising antagonisms in the conservation-development nexus. *Future Pasts Working Paper Series 5* <https://www.futurepasts.net/fpwp5-sullivan-2018>
- Sullivan, S. 2018b Bonding nature(s)? Funds, financiers and values at the impact investing edge in environmental conservation, pp. 101-121 *in* Bracking, S., Fredriksen, A., Sullivan, S. and Woodhouse, P. (eds.) *Valuing Development, Environment and Conservation: Creating Values that Matter*. London: Routledge Explorations in Development Studies.
- Sullivan, S. 2021a Rhinos in southwestern Africa: records of historical encounters. Online. <https://www.futurepasts.net/historical-references-rhino-namibia>
- Sullivan, S. 2021b Cultural heritage and histories of the Northern Namib: historical and oral history observations for the Draft Management Plan, Skeleton Coast National Park 2021/2022-2030/2031 *Future Pasts Working Paper Series 12* <https://www.futurepasts.net/fpwp12-sullivan-2021>
- Sullivan, S. in press. Maps and memory, rights and relationships: articulations of global modernity and local dwelling in delineating land for a communal-area conservancy in north-west Namibia. *Conserveries Mémorielles: Revue Transdisciplinaire* 25
- Sullivan, S. and Ganuses, W.S. 2021. Densities of meaning in west Namibian landscapes: genealogies, ancestral agencies, and healing, pp. 139-191 *in* Dieckmann, U. (ed.) *Mapping the Unmappable? Cartographic Explorations with Indigenous Peoples in Africa*. Bielefeld: Transcript.
- Suzman, J. 2017 *Affluence Without Abundance: The Disappearing World of the Bushmen*. London: Bloomsbury.

- Taylor, J.J. 2012 *Naming the land: San identity and community conservation in Namibia's West Caprivi*. Basel: Basler Afrika Bibliographien.
- Thomsen, J.M, Lendelvo, S., Coe, K. and Rispel, M. 2021 Community perspectives of empowerment from trophy hunting tourism in Namibia's Bwabwata National Park. *Journal of Sustainable Tourism*. <http://doi.org/10.1080/09669582.2021.1874394>
- Tindall, B.A. (ed.) 1959 *The Journal of Joseph Tindall: Missionary in South West Africa 1839-55*. Cape Town: The Van Riebeeck Society.
- Tinley, K.L. 1971 Etosha and the Kaokoveld. Supplement to *African Wild Life* 25(1): 3-16.
- Uri-Khob, S., Muntifering, J.R., Du Preez, P., Beytell, P., Uiseb, K. and Loutit, R. 2010 Namibia's Desert Rhino Renaissance. *Conservation and the Environment in Namibia* 2010/11: 24-25.
- US FWS n.d. Black rhino import permits from Namibia. United States Fish and Wildlife Service <https://www.fws.gov/international/permits/black-rhino-import-permit.html>
- Vedder, H. 2016[1938, 1966] *South West Africa in Early Times*. Windhoek: Namibia Scientific Society.
- Vigne, R. 1994 "The first, the highest", identifying Topnaar of Walvis bay and the Lower !Khuiseb river. Symposium, May 1994: Writing history, identity, society. Hanover, Univ. of Hanover.
- Wadley, L. 1979 Big Elephant Shelter and its role in the Holocene prehistory of South West Africa. *Cimbebasia* B 3(1): 1-76.
- Wallace, M. 2011 *A History of Namibia: From the Beginning to 1990*. London: Hurst & Co.
- Werner, W. 1993 A brief history of land dispossession in Namibia. *Journal of Southern African Studies* 19(1): 135-146.