A deep mapping prospect: the grounds of the Fort England Psychiatric Hospital as an urban greenspace

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Abstract

Urbanisation in South Africa is expanding at an alarming rate. With the ever-expanding growth of urban areas, it is essential to understand how urban greenspaces provide wildlife habitats, biodiversity hotspots, as well as act as movement corridors for birds and mammals. In this article, I investigate the grounds of the Fort England Psychiatric Hospital as a greenspace. The hospital is located in Makhanda, in the Eastern Cape Province of South Africa. I propose an investigation of the site that is informed by a branch of digital environmental humanities that uses digital technologies to mobilise collective action in the conservation and stewardship of a greenspace. To this end, the article calls for a deep mapping of the site to achieve a twofold research objective. First, to study the biodiversity of the site and explore how it functions as a refuge for threatened species. Second, to call for an inclusive management plan for the greening and conservation of the site that includes its importance for human use, environmental history, as well as for fauna and flora species. Accordingly, the site's management plan must engage, accommodate and negotiate a diverse set of interests, as well as mobilise action from various members of the community.

Keywords: digital environmental humanities, deep mapping, GIS, environmental history, greenspace

1   Introduction

Urbanisation in South Africa is expanding at an alarming rate with currently 63% of the population living in urban areas. By 2050, it is predicted that 80% of the population will be living in urban areas (Parliamentary Monitoring Group n.d.). With the ever-expanding growth of urban areas, it is essential to understand how urban greenspaces can provide wildlife habitats, biodiversity hotspots, as well as act as movement corridors for birds and mammals (Tryjanowski *et al.,* 2017). In this article, I investigate the grounds of the Fort England Psychiatric Hospital as a greenspace. The hospital is located in Makhanda (formerly Grahamstown), in the Eastern Cape Province of South Africa.

I propose an investigation of the site that is informed by a branch of digital environmental humanities that uses digital technologies to mobilise collective action in the conservation and stewardship of a greenspace (Posthumus & Sinclair 2016). To this end, the article calls for a deep mapping of the site to achieve a twofold research objective. First, to study the biodiversity of the site and explore how it functions as a refuge for threatened species. Second, to call for an inclusive management plan for the greening and conservation of the site. To substantiate, the site is of importance for human use, environmental history, as well as for fauna and flora species. Accordingly, the site's management plan must engage, accommodate and negotiate a diverse set of interests, as well as mobilise action from various members of the community.

The site can be regarded as a "living record" (Perkins 2015:19) of how it has been shaped by past narratives of tree planting and landscaping. Hence, the discussion commences with the planting narratives that took root in the early 1890s when the hospital was known as the Grahamstown Lunatic Asylum. These narratives transformed the landscape of the nineteenth-century site and can still be evidenced on the grounds of the present-day site. Thereafter, the discussion identifies how the grounds of the present-day site – that is composed of green areas that originated in the nineteenth-century, as well as a wetland area populated with healthy vegetation – can be explored as an urban greenspace that provides an important reservoir of biodiversity and refuges for species.

2   The Nineteenth-century tree and planting narratives

Vast tracts of land for pasturage, groves of trees, gardens gleaming in colour, and land for cultivation were significant features in the nineteenth-century lunatic asylums in South Africa. In their annual reports submitted to government, the medical superintendents of the asylums proudly drew attention to how they implemented landscaping projects at their respective sites. In this way, the landscaping of an asylum's grounds can be regarded as one of the key performance areas that the government required reporting on. By way of example, shortly after the opening of Town Hill Hospital (1880) in Pietermaritzburg, over 2,000 trees were planted at the site (Parle 2007:97). By the 1890s, the grounds were so well planted with trees and shrubs that it came to resemble a "country estate" (Parle 2007:284). At Weskoppies (1892) in Pretoria, in the year of its opening alone, 500 trees were planted, and in 1893, a 2.5 hectare vegetable garden was laid out (Plug & Roos 1992:219). In the early decades of the twentieth century, owing to the continued greening of the grounds, Weskoppies came to look like a lush retreat (Du Plessis 2012).

The site of the Grahamstown Lunatic Asylum (1875) was elected for offering 50 acres of countryside that was suitable for cultivation and pasturage (Du Plessis 2012:27). The asylum's grounds were extensively developed during Dr Thomas Duncan Greenlees's tenure as the medical superintendent of the institution, from 1890 to 1907. Greenlees made a momentous imprint on the landscape of the site and his influence is still strikingly visible on the grounds of the present-day hospital. Owing to the landscape of the current site bearing a longstanding stamp of Greenlees's design for the place, I seek to explore the narratives that guided his approach. This exploration is guided by Joanna Dean's (2015:162) call for researchers to unearth the narratives that "shape our thinking" about trees and plants. These narratives have a bearing on the value and meanings that we attribute to plants, it influences what species we choose to place in the ground, and it informs our decisions on how we manage the rooted plants, shrubs and trees of a specific site (Dean 2015:162).

The first narrative is moral therapy. Greenlees's therapeutic regimen at the asylum was guided by moral therapy that postulated that keeping patients occupied, distracted and stimulated by activities held the potential to keep at bay or even wipe out unhealthy habits, thoughts and actions (Du Plessis 2020:75). To this end, Greenlees constructed sportsgrounds as a means to divert the patients from having any melancholic thoughts. A cricket pitch was levelled for the use of young men, while a bowling green was established for the enjoyment of elderly men. The grounds of the asylum offered women lawn tennis and a field for playing croquet.

Apart from sporting activities, the asylum's grounds were used for numerous recreational activities including walking along footpaths, as well as picnics on the sprawling lawns. By reading the asylum's casebooks, it is evident that the grounds provided the patients with a stimulating environment. By way of example, Wilfred (HGM 8:41) was pictured to be "never happier than when he is reading in a corner of the garden". Frederick (HGM 2:117) treasured being outdoors where his interests in natural science could be quenched. Frederick, like an intrepid explorer, would scout the grounds for specimens of fauna and flora to study. From his many expeditions, he accumulated pets – including a chameleon – and picked flowers that he brought back to his ward for closer examination.

Besides for sporting and leisure activities, the asylum sought to occupy the patients with outdoor labour. One example of outdoor labour was assigning the upkeep, maintenance and tending of the asylum's gardens to the responsibility of the patients. The casebooks outline that for some patients the gardening was an opportunity to express a degree of self-autonomy by creating a garden that was in accord with their own inspiration. Ludwig (HGM 6:35) relished gardening and was praised by the staff for keeping the "front garden in beautiful order". Significantly, the staff also noted that Ludwig "dislikes any interferences" with the way he

designed and maintained the garden. In this sense, gardening gave Ludwig an opportunity to engage in self-directed actions, as well as to enact his personalised inspiration for a plot on the asylum's grounds. After clearing a garden of weeds and overrun grasses, Emily (HGM 26) penned a letter to the asylum's authorities to request the purchase of "suitable plants that are up to date in novelty also splendour". Another letter by Emily is of outstanding interest as she includes a pressed cutting of a blue passion flower (*Passiflora caerulea*). Emily's pressed cutting allows us to consider a richer understanding of how patients experienced and appreciated the grounds of the asylum. It is plausible to suggest that Emily reconnoitered the grounds to find flowerbeds in need of tending while also keeping her eye open for alluring and enchanting flowers to make into pressed cuttings.

The second narrative was aesthetics. The asylum's annual reports repeatedly underline how Greenlees sought to improve the appearance of the site by the planting of ornamental trees, flower gardens and hedges. For example, a hedge of Kei apples (*Dovyalis caffra*) was planted along the driveway to the asylum. By 1906, Greenlees remarked that the asylum's well-established groves of trees, hedges and shrubs resulted in the site being one of the "prettiest suburbs" of the town (G31–1907:60). In broad outline, it is plausible to argue that Greenlees's zealous dedication to improve the outdoor aesthetics of the asylum was underpinned by two motivations: correcting public misperceptions of the asylum; and to gain the patronage of paying patients (Du Plessis 2012, 2013, 2020). In terms of the former, Greenlees sought to address the public's misperception of asylums to be closely aligned with jails (Du Plessis 2020). To correct this misperception, Greenlees, like his fellow medical superintendents, created an "aesthetic asylum environment" (Deacon 2000:151) that was teeming with ornamental trees and flowerbeds, while being at the same time devoid of any visible elements that would be indicative of prisons. In terms of the latter, Greenlees sought to attract and increase the admittance of paying patients to the asylum. However, it was precisely this class of patients who were reluctant to resort to asylum treatment and instead preferred admittance to sanatoriums that were set within picturesque grounds (Du Plessis 2013). Accordingly, one means to attract and secure the patronage of paying patients to the asylum entailed enhancing the aesthetics of the site to rival that of the country's sanatoriums.

The third narrative is farming. In the asylum's annual reports, Greenlees underscored the integral economic and therapeutic role that farming played to the institution. To begin with, owing to the adoption of moral therapy at the asylum, the farm labour performed by the patients was believed to hold therapeutic intent by keeping the patients occupied, as well as offering a "useful outlet" for patients to expel and expend their excess energy (G24–1894:52). An equally important role of farming was that it made it possible for the asylum to produce their own food and therefore aided in reducing the asylum's expenditure on purchasing food from suppliers. The farm was so crucial to the optimal functioning of the asylum that Greenlees frequently sought the advice from the government's Agricultural Department to improve its bearing capabilities (G36–1892:41). Over the years, the farm estate grew in size as the government purchased several lots of land that bordered the asylum. Consequently, the asylum's larger farm estate produced a higher yield of produce, which in turn contributed financial savings to the institution. To demonstrate, in the annual report for 1902, Greenlees proudly declared that the farm supplied the asylum with "7,304 gallons of milk during the year; this, at contract price, amounts to £291 17s. 2d., and represents an actual saving to the Asylum. Vegetables, meat and fruit were supplied to the Asylum to the amount of £750 10s. 4d." (G60–1903:108). During Greenlees's tenure, a hallmark of the farm was not only its high yield, but also its diversity of produce. For example, the farm account of 1903 (Table 1) itemises a smorgasbord of produce that ranged from staple foods, to fruit and even crops of rhubarb for sweet culinary treats. Such a diversity of produce allowed for the asylum to achieve a degree of self-sufficiency to

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Figure 1: The grounds of the Grahamstown Lunatic Asylum, c. 1890's (Reproduced by permission of the Western Cape Archives and Records Service, reference number: A.G. 374).

make available to the patients a healthy and nutritious diet scale (Du Plessis 2021).

Table 1: Farm account for 1903 (G55–1904:126)

Quantities of produce supplied to the Asylum
61,546 pounds vegetables
7,345 pounds potatoes
178.5 packets beans
39.5 packets peas
106 bunches rhubarb
11,940 pounds fruit
16,260 quarts milk
308 maize cobs
26,650 pounds Lucerne
300 oranges
4,668 pounds tomatoes
201 cucumbers
850 pounds pork
454 pounds beef
21 pounds mutton

Towards the end of Greenlees's tenure, the asylum boasted a diverse landscape that was strikingly set apart from the semi-arid environment of the region. This is compellingly captured in a photograph of the asylum's gardens (Figure 1) where tracts of neatly tendered crops are visible in the middle-ground. On the left-side, we see resplendent rows and thickets of towering ornamental trees that cocoon the asylum buildings with an aura of grandeur and grace. Overall, the grounds of the asylum are picturesque, abounding in arable land, bearing a cornucopia of cultivated crops, as well as exquisitely enveloped by greenery. The photograph represents the grounds of the asylum as a green oasis, which is juxtaposed to the city's outskirts – visible in the background – that are conspicuously bleak. In sum, the narratives of moral therapy, aesthetics and farming transformed the site of the asylum into a micro-environment that bore very little connection to the surrounding region.

3   An urban greenspace

In the present-day, the grounds of the hospital still bear the imprint of Greenlees's planting narratives, as open spaces for sporting activities are available and a large variety of well-established trees and plants remain resolutely rooted in place.

The site is also marked by vast undisturbed areas of healthy vegetation that thrive in a wetland. A highlight of the wetland is the lush banks of a stream that harbour a canopy of tall trees and a dense concentration of shrubs. To meander along the stream (Figure 2) is a chance to witness how it offers a habitat to a multitude of fauna and flora species. The colossal trees provide shaded paths where every step that one takes is done as to not disturb or damage the undergrowth that is teeming with critters. When pausing on the path we hear the sonorous songs of birds, as well as a symphony of sounds made by insects that keep our ears abuzz. Thus, highlighted in the hospital's grounds is how it constitutes an urban greenspace.

The proposed study will investigate this greenspace with the aim of exploring how it functions as a refuge for threatened species. To substantiate the importance of such an exploration, I draw upon Donna Haraway. If the problem posed by the Anthropocene is the loss of life and habitats, Haraway (2015:160) points to a promising solution by calling for us to "join forces to reconstitute refuges" for the increasing number of fauna and flora species that have become refugees from habitat loss. Thus, the proposed study calls upon us to recognise our role as "ecological actors" (Perkins 2015:21) in creating, maintaining and safeguarding the refuges on the hospital's grounds.

Although there has been no published study on investigating the sites of psychiatric hospitals as greenspaces, an initial framework to guide a study on the grounds of the Fort England psychiatric Hospital can be found in scholastic studies of cemeteries as greenspaces (Barrett & Barrett 2001; De Lacy & Shackleton 2017; Kowarik, Buchholz, Von der Lippe & Seitz 2016; Löki, Deák, Lukács & Molnár V 2019; Tryjanowski et al. 2017). The hospital's site shares a number of landscape features with cemeteries, in particular, both sites include areas of undisturbed habitat, as well as areas that have undergone long periods of "anthropogenic landscape transformation" (Barrett & Barrett 2001:1823). As a greenspace, cemeteries have been found to be of key importance for conservation and are resoundingly valued for offering biodiversity refuges (Kowarik *et al.,* 2016; Löki *et al.,* 2019). A focal point for the proposed study of the hospital's grounds is the research conducted by Peter de Lacy and Charlie Shackleton (2017) who examined the conservation of trees and shrubs at the urban churchyards and cemeteries of Makhanda. Their research concluded that the sites harbour a variety of woody vegetation that provide an important ecosystem refuge in the urban setting (De Lacy & Shackleton 2017:1178).

Figure 2: The stream on the grounds of Fort England Psychiatric Hospital (Photograph by author)

An aid to the proposed study would be the use of Geographic Information Systems (GIS) to visualise the various ecosystem types and functions across the site's different areas (Eanes, Silbernagel, Robinson & Hart 2019:7). Clearly visible in a map of the hospital's grounds (Figure 3) is the wetland area with its grove of greenery.

Figure 3: Map of the Fort England psychiatric Hospital. The hospital's grounds cover approximately 432,898 m². The wetland area is approximately 94,702 m² in size and is highlighted in yellow (Map data © 2021 Google, Maxar Technologies).

The map also brings to our attention that patches of vegetation are peppered across the built-up regions of the hospital. By tracking and measuring the abundance and distribution of fauna and flora species on the hospital's grounds with GIS, it is possible to identify and visualise the areas that are hotspots for biodiversity, as well as the areas that are of key importance for conservation.

The GIS visualisations will also be valuable for identifying how the site's different areas require their own specialised management plans for conservation and maintenance. By way of example, in the wetland area, exotic plants and invasive species can be earmarked for removal. Furthermore, sections of the wetland that require rehabilitation can be highlighted for immediate remedying. In regard to the built-up regions of the site, GIS can be used to pinpoint areas that can be cultivated to offer a refuge habitat for fauna and flora species, as well as to identify the areas that require greening or the eradication of invasive plants.

Although the proposed use of GIS is well-suited to visualise the ecological features of the site, it is unsuitable for the inclusion of the historical narratives of the hospital's grounds which are important for designing and implementing site management policies (Sandberg, Bardekjian & Butt 2015:5). In other words, if the trees on the hospital's grounds can be regarded as a "living symbol of the past" (Dean 2015:165), we require a form of mapping that allows us to keep in view the historical narratives that resulted in the transformation of the landscape.
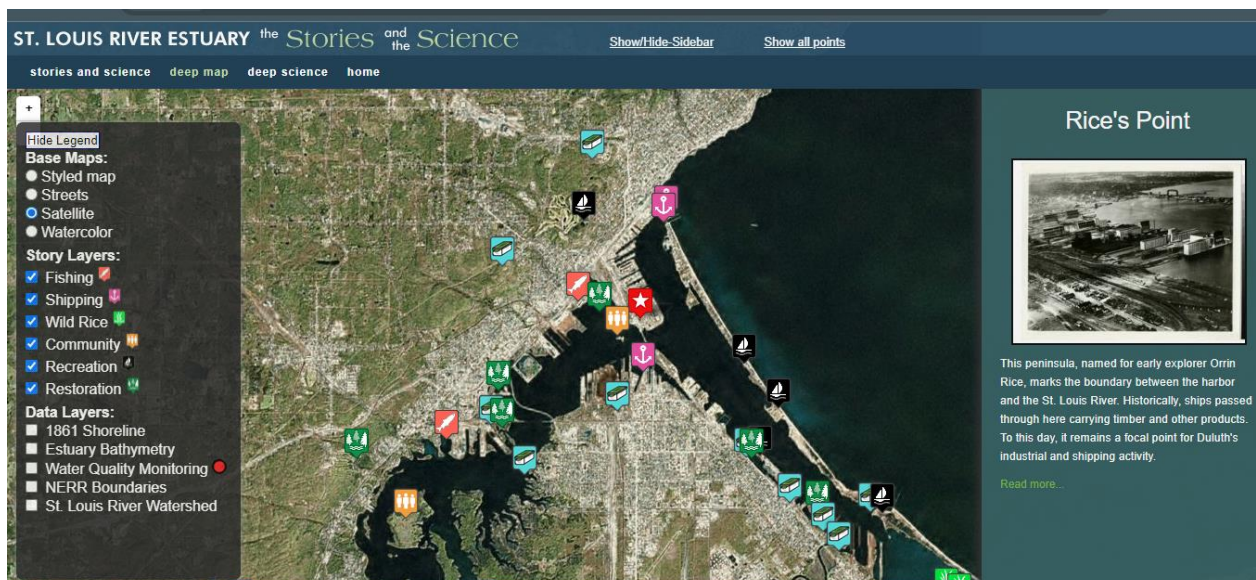
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Figure 4: Screenshot of the interface for the St. Louis River Estuary Deep Map: Version 2.0 (Deep Map [n.d])

4 Deep mapping

Salient to the proposed study is deep mapping that offers a "GIS-enabled fusion of qualitative and quantitative data" (Bodenhamer 2013:12) to achieve a "finely detailed depiction of a place, its history, landscape, and culture, and the people, animals, and objects that exist within it" (Warf 2015:135). Simply stated, while conventional mapping is concerned with the location and identification of the natural and manmade features of a site, deep mapping supplements these by the inclusion of the memories that connect people to the site, the lived experiences of people at the site, as well as the stories and narratives of the site.

In practical terms, as there is "no one way to create a deep map" (Butts & Jones 2021:5), I envisage the proposed study's deep map to resemble "The Stories and Science of the St. Louis River Estuary" (http://stlouisriverestuary.org/) which offers users an online interactive site that contains multiple story and data layers over a Cartesian base map [1]. The user engages with the deep map by selecting, in the Legend, how many data and story layers they wish to visualise. With every layer selected, geo-tagged icons appear on the map.

Each icon, when clicked on, opens a portal that identifies the name of the site and contains multimedia content pertaining to its facts, stories and narratives (Figure 4).

In the proposed deep map of the hospital, one layer will be dedicated to the site's ecological data. This layer extends the initial scope of the GIS undertaking (see the discussion of Figure 3), by calling for the inclusion of multimedia content, as well as contributions from multiple collaborators (Eanes *et al.,* 2019). In this regard, the mapping encourages the incorporation of field observations and recordings made by various individuals – including ecologists, healthcare workers, mental healthcare users and the public. The resulting field observations that include photographs of fauna and flora species, botany sketches, audio-clips of birds and videos of endangered fauna can be geotagged to the map.

A second layer will be constituted by the stories and memories of the site tendered by its current users. This layer foregrounds the multiple meanings of the site, it identifies the tree and plant stories held by various individuals, as well as offers an awareness of the users' needs and interests for the site. These aspects can potentially inform a conversation about the aims of the greening and

conservation projects for the site. Stated differently, this layer of the map is characterised by heterogeneous viewpoints that can be placed in a conversation with one another for the purposes of achieving collaborative greening and conservation projects where the interests of multiple parties are incorporated (Eanes *et al.,* 2019:8).

The third map layer will be dedicated to the history of the Grahamstown Lunatic Asylum's grounds as a product of "human creativity, will, ingenuity, and labor" (Perkins 2015:21). One focus area will pay attention to Greenlees's impact on the site's landscape. To this end, an in-depth analysis of Greenlees's tree and plant narratives can be complemented by the inclusion of the annual records of the farm account, photographs of the site, historical surveys of the site, as well as articles in periodicals and newspapers that feature the asylum. A further focus area will pay attention to the historically marginalised voices of the patients and sensitising us to their experiences (Butts & Jones 2021; Warf 2015:136). Although some facets of the experiences of the patients were outlined earlier in the article, in this discussion our attention is drawn to how the daily life that a patient encountered in the asylum was shaped by their demographic profile.

Greenlees implemented different dispensations of moral therapy based on the race, class and gender profile of the patients (Du Plessis 2020:75–85). The white paying patients were offered a treatment regimen that favoured outdoor leisure and sport over labour duties, as well as a diet scale that was characterised by its large and varied quantities of food. The treatment regimen for non-paying white patients favoured keeping them occupied in labour duties with occasional opportunities for recreation, as well as a less substantial diet scale. Lastly, the black subjects received a petered-out version of moral therapy that focused on labour duties. In many ways, for black subjects the asylum may can be figured as a workhouse in which the central thrust was daily drudgery with a severely reduced diet scale and limited leisure time. For example, black women received less access to walks and leisure time, as

their labour in the laundry room was essential to the optimal running of the asylum.

This layer of the map can be supplemented with extracts from the asylum's casebooks that offer an invaluable means to redress the history of the asylum. One pertinent avenue of redress relates to patient labour. While the official record of the asylum showcases Greenlees's vision and design for the site, it marginalises the contributions made by the patients to the planting of the trees and to their toiling on the land to transform the landscape. This map layer corrects such a "knowledge distortion" (Harris, Corrigan & Bodenhamer 2015:225) by documenting how the unpaid labour performed by the patients was instrumental in shaping the grounds of the asylum. This may possibly impart in the current users of the hospital a profound recognition that the "world around [them] is connected to the lives, labor and loss" (Catte 2021:185) of the patients who resided at the asylum from the end of the nineteenth-century to the first decades of the twentieth-century.

In the movement between the layers of the map, the viewer develops multiple perspectives of the site and becomes cognisant that the meanings of the hospital's grounds are nuanced, and with every subsequent reengagement of the various layers of the deep map, the viewer may develop new insights, explore a fresh viewpoint, or be confronted by a novel question. Stemming from these interactions with the map, the viewer is likely to develop an acute awareness of the socio-cultural, historical and ecological complexities of the site (Eanes *et al.,* 2019).

5 Conclusion

The grounds of the hospital are steeped in tree and plant narratives, saturated with stories of people engaging with the land, as well as brimming with green areas that are a habitat for a diversity of fauna and flora. The hospital's grounds are thus composed of competing and conflicting arms that require addressing and inclusion in the planning framework and management guidelines for the site. The layers of the envisaged deep map will aid

in exploring and raising awareness of these diverging arms and how they should be prioritised within designated areas of the site.

A deep map is "aimed at changing the world they represent" (Warf 2015:136). Along these lines, by producing a deep map of the hospital's grounds, we are provided with a means to envisage the site as a refuge for humans, as well as for fauna and flora. For humans, the site can become a sanctuary through the planting of trees to offer shaded harbours for rest and meditation, it can be a recreational haven, as well as captivate one's senses on walking trails through the diverse terrains of the site. With the planting of a vegetable garden, the site can secure a supply of fresh produce for the kitchens. For fauna and flora, the conservation of the wetland, as well as the greening of other areas, will nurture safe havens for species to be replenished and to thrive in abundant numbers. In the not too distant future, the hospital's grounds may prove to be an asylum – a place of protection and shelter – for humans, fauna, and flora.

Notes

[1] The proposal for the deep mapping does not include an outline of the programmes, systems and software that would be implemented in the study, rather the focus is on showcasing the potential merits of deep mapping to visualise, explore and raise awareness of the site as an urban greenspace.

References

Barrett, Garry W., and Terry L Barrett. 2001. "Cemeteries as Repositories of Natural and Cultural Diversity." *Conservation Biology* 15(6): 1820–1824. https://doi.org/10.1046/j.1523-1739.2001.00410.x

Bodenhamer, David J. 2013. "Beyond GIS: Geospatial Technologies and the Future of History." *In History and GIS: Epistemologies, Considerations and Reflections*, edited by Alexander von Lünen and Charles Travis, 1–13. London: Springer.

Butts, Shannon and Madison Jones. 2021. "Deep mapping for environmental communication design." *Communication Design Quarterly* 9(1): 4–19. https://doi.org/10.1145/3437000.3437001

Cape of Good Hope. Reports on the Government Aided Hospitals and Invalid Homes, on Asylums for Lunatics and Lepers, and on Chronic Sick Hospitals, including Report of the Inspector of Lunatic Asylums. G24–1894, G36–1892, G60–1903, G55–1904, G31–1907. Cape of Good Hope: Colonial Secretary's Office.

Catte, Elizabeth. 2021. *Pure America: Eugenics and the Making of Modern Virginia*. Cleveland: Ohio.

Deacon, Harriet. 2000. "Landscapes of Exile and Healing: Climate and Gardens on Robben Island." *The South African Archaeological Bulletin* 55(172):147–154. https://doi.org/10.2307/3888963

Dean, Joanna. 2015. "The Unruly Tree: Stories from the Archives." In *Urban Forests, Trees, and Greenspace: A Political Ecology Perspective*, edited by L. Anders Sandberg, Adrina Bardekjian & Sadia Butt, 162–175. New York: Routledge.

Deep Map. [n.d.]. The Stories and Science of the St. Louis River Estuary. [O]. Available http://stlouisriverestuary.org/map/map.php#12/46.7343/-92.1018

De Lacy, P and Charlie M. Shackleton. 2017. "Woody Plant Species Richness, Composition and Structure in Urban Sacred Sites, Grahamstown, South Africa." *Urban Ecosystems* 20: 1169–1179. https://doi.org/10.1007/s11252-017-0669-y

Du Plessis, Rory. 2012. "The influence of moral therapy on the landscape design of lunatic asylums built in the nineteenth century." *de arte* 47(86): 19-38. https://doi.org/10.1080/00043389.2012.11877170

Du Plessis, Rory. 2013. "Promoting and popularising the asylum: photography and asylum image-making at the Grahamstown Lunatic Asylum, 1890-1907." *Image & Text* 22: 99-132. https://hdl.handle.net/10520/EJC150943

Du Plessis, Rory. 2020. *Pathways of Patients at the Grahamstown Lunatic Asylum, 1890 to 1907*. Pretoria: Pretoria University Law Press.

Du Plessis, Rory. 2021. "The 'Gospel of Fatness' and Acts of Sitophobia: The Foodscape and Power Relations at the Grahamstown Lunatic Asylum, 1890 to circa 1910." *Gender Questions* 9(1). https://doi.org/10.25159/2412-8457/7405

Eanes, Francis R., Janet M. Silbernagel, Patrick Robinson, and David A. Hart. 2019. "Interactive Deep Maps and Spatial Narratives for Landscape Conservation and Public Engagement." *Landscape Journal: Design, Planning, and Management of the Land* 38(1): 7–24. muse.jhu.edu/article/760559.

Haraway, Donna. 2015. "Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making kin." *Environmental Humanities* 6: 159–165.

Harris, Trevor M, John Corrigan and David J. Bodenhamer. 2015. "Conclusion: Engaging Deep Maps." In *Deep Maps and Spatial Narratives*, edited by David J. Bodenhamer, John Corrigan and Trevor M. Harris, 223–233. Bloomington & Indianapolis: Indiana University Press.

HGM [Hospital Grahamstown Mental]. Grahamstown Lunatic Asylum Casebooks. Western Cape Archives and Records Service.

Kowarik, Ingo, Sascha Buchholz, Moritz von der Lippe, and Birgit Seitz. 2016. "Biodiversity functions of urban cemeteries: Evidence from one of the largest Jewish cemeteries in Europe." *Urban Forestry & Urban Greening* 19: 68–78. https://doi.org/10.1016/j.ufug.2016.06.023

Löki, Viktor, Balázs Deák, András Balázs Lukács, and Attila Molnár V. 2019. "Biodiversity potential of burial places – a review on the flora and fauna of cemeteries and churchyards." *Global Ecology and Conservation* 18. https://doi.org/10.1016/j.gecco.2019.e00614

Parle, Julie. 2007. *States of mind: Searching for mental health in Natal and Zululand, 1868–1918*. Scottsville: University of KwaZulu-Natal Press.

Parliamentary Monitoring Group. n.d. "Urbanisation." Accessed May 17, 2021. https://pmg.org.za/page/Urbanisation

Perkins, Harold. 2015. "Urban Forests are Social Natures: Markets, Race, Class, and Gender in Relation to (Un)Just Urban Environments." In *Urban Forests, Trees, and Greenspace: A Political Ecology Perspective*, edited by L. Anders Sandberg, Adrina Bardekjian and Sadia Butt, 19–34. New York: Routledge.

Plug, C., and J.L. Roos. 1992. "Weskoppies Hospital, founded 1892 – the early years." *South African Medical Journal* 81: 218–221.

Posthumus, Stephanie and Stéfan Sinclair. 2016. "Digital ? Environmental : Humanities." In *Routledge Companion to the Environmental Humanities*, edited by Jon Christenson, Ursula Heise, and Michelle Niemann, 369-377. London/New York: Routledge.

Sandberg, L. Anders, Adrina Bardekjian and Sadia Butt. 2015. "Introduction." In *Urban Forests, Trees, and Greenspace: A Political Ecology Perspective*, edited by L. Anders Sandberg, Adrina Bardekjian and Sadia Butt, 1–16. New York: Routledge.

Tryjanowski, Piotr, Federico Morelli, Peter Mikula, Anton Krištín, Piotr Indykiewicz, Grzegorz Grzywaczewski, Jakub Kronenbe. 2017. "Bird diversity in urban green space: A large-scale analysis of differences between parks and cemeteries in Central Europe." *Urban Forestry & Urban Greening* 27: 264–271. https://doi.org/10.1016/j.ufug.2017.08.014

Warf, Barney. 2015. "Deep Mapping and Neogeography." In *Deep Maps and Spatial Narratives*, edited by David J. Bodenhamer, John Corrigan and Trevor M. Harris, 134–149. Bloomington & Indianapolis: Indiana University Press.