

# **“Preventing a silent wilderness, securing the economic bounty” – Cape guano and the politics of seabird protection during the 19<sup>th</sup> and early 20<sup>th</sup> century**

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## ***Abstract***

The Cape Colony, after Peru, was the second-most-important supplier of seabird guano to commercial farmers on a worldwide scale during the nineteenth century. Despite the obvious benefits of selling guano licenses and leases to exploit various offshore islands within the Cape’s colonial waters for the colonial treasury at a time of decreasing imperial funding, successive administrations placed no restrictions over the harvesting of these spaces. Under conditions of administrative indifference and lack of proper oversight, the islands’ topography was disrupted and the birds temporarily driven away. Uncontrolled guano-scraping, egg collection, and wanton killing of the birds further aggravated this situation. Mindful of their investment and to ensure their enterprise’s continued profitability, leaseholders collectively instituted certain control measures, including appointing a peace officer and maintaining an armed contingent to oversee the daily collection, regulate landings, protect the birds, and prevent guano theft. Critically, they introduced an open and closed season for the guano collection. This measure was consistent with developments overseas where a greater sensitivity for nature conservation started to emerge, in turn, overlapping with increased demand from Cape farmers for legislative protection of a wide range of ‘useful animals’. Following years of pressure from commercially orientated farmers and their political representatives to secure access to cheap and subsidised fertiliser, the Cape Government established full governmental control over guano exploitation from Ichaboe on the Namibian coast to Algoa Bay in the southeast of the Colony. Enforcing the English Sea Birds Preservation Act 1869 and its suite of existing game protection laws, the colonial Department of Lands, Mines and Agriculture adopted the former island leaseholders’ proven and regulating regime. Prompted by perennial guano shortages and incessant demand by Cape farmers, the authorities regularly amended existing measures to the benefit of the agricultural sector resulting in animals’ continued protection. The early 1890s’ laws also included bats whose excrement gradually received status as a useful fertiliser. Having ensured the ‘economic bounty’ through its various laws, by the end of the Century, for moral reasons it could afford to

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extend protection to other game including pigeons and shrikes and “prevent a silent wilderness”.

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## Introduction

The Cape Colony had a long interaction with and dependence on wild and domesticated animals for either food or power; to the extent that its social life's rhythms were attuned to its relationship with animals.<sup>2</sup> However, a broader sensitivity for protecting the environment was largely absent in early nineteenth-century South Africa.<sup>3</sup> Van Sittert summarised the Cape colonial elite's attitude during this time, as one of environmental indifference and antipathy, manifested by the preference for exotic plants and the avoidance of indigenous species.<sup>4</sup> Therefore, it is no surprise that indigenous wild animals (including seabirds) were regarded as economic bounty, whose slaughter and exploitation were morally acceptable.<sup>5</sup> The nineteenth-century Cape guano trade, an industry based on the collection and sale of various seafoal excrement, offers a useful window into the evolution of environmental consciousness in Cape colonial society. It also coincided with developing a close link between “agricultural production, environmental understanding, and the attempts to conserve natural resources”.<sup>6</sup>

The Cape guano trade and its associated environmental impact on seabirds, agriculture and the ecology of the coastal islands locate elements of the topic in the richly textured field of environmental history – a field with a prominent institutional presence.<sup>7</sup> Flores broadly defined environmental history as “the study of different human groups and our evolving relationships with ‘nature’ through time”.<sup>8</sup> It also forms an integral part of the revisionist tradition

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2 W Beinart, *The rise of conservation in South Africa: Settlers, livestock, and the environment 1770-1950* (Oxford, Oxford University Press, 2003), p. 7.

3 J Carruthers, “Changing perspectives on wildlife in Southern Africa, C.1840 to C.1914”, *Society and Animals*, 13(3), 2005, p. 192.

4 L Van Sittert, “From ‘mere weeds’ and ‘bosjes’ to a Cape floral kingdom: The re-imagining of indigenous flora at the Cape, c. 1890-1939”, *Kronos*, 28, Nov, 2002, p. 104.

5 J Carruthers, “Changing perspectives on wildlife ...”, *Society and Animals*, 13(3), 2005, p. 187.

6 W Beinart & P Coates, *Environment and history: The taming of nature in the USA and South Africa* (London, Routledge, 2002), p. xv.

7 S Sörlin & P Wårde, “The problem of the problem of environmental history – a re-reading of the field and its purpose”, *Environmental History*, January 2007, 12(1), pp. 107-130.

8 D Flores, “Environmental history: An art of people and place”, *Organization of American Historians (OAH) Magazine of History*, 1996, p. 4.

of historiography.<sup>9</sup> Environmental history initially focussed narrowly on environmental issues (for example, the influence of ecological factors on historical events). It has evolved to a point where diversity of topics such as nature conservation, erosion, medicine and history are covered.<sup>10</sup> According to Worster, environmental history's central tasks are reconstructing the structure, functioning and historical redistribution of the natural environment and its interaction with humans and technology – the so-called “agro-ecological perspective”.<sup>11</sup> This approach focuses on understanding the natural trophic processes, that is the processes that determine the flow, channelling and organisation of food and energy within the economy of a small group of living species. It also aims to understand better the role of myths, technology and ideology in the dialogue between individuals, groups and nature. The historian's task is to uncover all the different interaction areas, especially the rational and systematic reorganisation of plants and animals' natural world through fertilisation and related activities.

Powers and Dovers argue that the practice of environmental history is by its nature an interdisciplinary activity. As such, its practitioners actively search for “complementary ways of thinking about questions that span shared interests”.<sup>12</sup> This view is supported by Mosley, who believes that environmental and social history is naturally and logically compatible and complementary.<sup>13</sup>

The meeting of guano scrapers, maritime business and seabirds, within the context of the emergence of new economic identities such as “guanopreneurs” and the interaction of imperial and colonial politics, also place this study within the framework of social, political, business and economic history. Hobsbawm, therefore, correctly argue that the scope of social history should not be limited to a small number of pre-defined research areas.<sup>14</sup> This meeting

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9 P Steyn, “The greening of our past? An assessment of South African environmental historiography” (Paper, Meeting of the American Society for Environmental History, Tacoma, Washington, *H-Environment Historiography Series*, 2000, available at <http://www2.h-net.msu.edu/~environ/historiography>, as accessed on 14 May 2007).

10 P Sutter, “Reflections: What can U.S. environmental historians learn from non-U.S. environmental historiography?”, *Environmental History*, Jan, 2003, p. 2 (available at [www.historycooperative.org/journals/eh/8.1/sutter.html](http://www.historycooperative.org/journals/eh/8.1/sutter.html), as accessed on 15 Jul 2007).

11 D Worster, “Transformation of the earth: Toward an agroecological perspective in history”, *Journal of American History*, 76, 1990, p. 1090.

12 E Pawson & S Dovers, “Environmental history and the challenge of interdisciplinarity: An antipodean perspective”, *Environment & History*, 9, 2003, p. 8.

13 S Mosley, “Common ground: Integrating social and environmental history”, *Journal of Social History*, 39(3), 2006 (available at <http://www.historycooperative.org/journal/jsh/39.3/mosley.html>, as accessed 14 May 2007), p. 915.

14 EJ Hobsbawm, “From social history to the history of society”, *Daedalus*, 100(1), 1971, p. 24.

of environmental history (with its ecological focus) and social history (with its concern for class, gender, race and ethnicity focussing on events over a widely dispersed area involving humans and animals) assists the historian in developing a transnational and global perspective and balancing the “agency of nature” with that of humans, while simultaneously explaining change over time.<sup>15</sup> Whereas former chartered companies with guano interests in the Pacific Ocean, such as Lever Brothers, evolved into modern multinational entities, most of the local guano companies who exploited the offshore islands in the Atlantic Ocean off the west and eastern coast of Africa, including De Pass, Spence & Company and JO Smith & Company, are defunct. Salmon suggests that research into the structures, functions, relationships and failures of now-defunct companies could help develop a deeper understanding of an important period in world history.<sup>16</sup> Jones concurred with this view and argued that given the pioneering role of these former companies, new insights concerning company evolution could also be gained.<sup>17</sup> These matters, however, falls somewhat outside of the scope of the present article.

### **Upwelling, seabirds and guano**

At the beginning of the nineteenth century, scientists proved the efficacy of guano (excrement of seabirds) as a natural fertiliser. Rich in nitrogen and phosphate, highly soluble and suitable for both heavy and light soil types, guano potentially offered commercial farmers the means to restore their land’s productivity.<sup>18</sup> Peru, the only known source of the product at the time, however, suffered political instability and frequent military coups. The Inca, the predecessors of the nineteenth-century Peruvians, used the excrement of gannets, cormorants, penguins and pelicans collected from the nearby offshore islands of Lobos, Guanape and Chinchá to fertilise agricultural land on which they grew a variety of crops.<sup>19</sup> By the innovative coupling of guano fertilisation and irrigation, they achieved a consistent food surplus of between three-

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15 S Mosley, “Common ground: ...”, *Journal of Social History*, 39(3), 2006, p. 919.

16 MS Salmon, “A bull market: The recent historiography of Canadian development”, *Archivaria*, 43(1), 1997, p. 181 (available at [http://journals.sfu.ca.archivaria/index/article/view/12182/13194](http://journals.sfu.ca/archivaria/index/article/view/12182/13194), as accessed on 31 Oct 2007).

17 G Jones, “Diversification strategies and corporate governance in trading companies”, *Business and Economic History*, 25(2), 1996, p. 109.

18 See J Goodman, “Guano happens (sometimes)”, *Geographical Magazine*, Nov 2006, p. 41; JR McNeill & V Winiwarter, “Breaking the sod: Humankind, history, and soil”, *Science*, 304, 2004, p. 1628.

19 YG De La Vega, *Royal commentaries of the Yncas* (London, Hakluyt Society, 1871), p. 5.

seven years and concomitantly enjoyed a significant food security level.<sup>20</sup> The product became a fundamental part of their existence and the resource most closely associated with their mythical rebirth as a people.<sup>21</sup> Disturbance of the birds and their nests, therefore, became a capital offence. This dispensation prevailed until the end of Spanish colonialism and the formal declaration of Peru's independence in 1821. Following European scientists' scientific demonstration of the nitrogen and phosphate richness, solubility and suitability of seabird guano for both heavy and light soil types, the struggling post-independence state fully commoditised the product.<sup>22</sup> Lacking a reliable and consistent revenue source, the post-independence government awarded guano concessions to several multinational consortiums consisting of British and Peruvian businessmen in exchange for cash advances.<sup>23</sup> The collected guano was then shipped and sold in both the United States of America (USA), Great Britain and Europe. However, political instability and frequent military coups limited successive military regimes' lifespan, disrupting supply to the target market. Official export procedures, including a special consuls system at harbours to inspect the cargo and issue further sailing instructions further complicated this already irregular supply.<sup>24</sup> These measures delayed the rapid export and sale of the product to the USA, Great Britain and Europe. Although the concession holders were entitled to an unlimited supply of free guano to cover their operational costs; they and the commercial farmers found themselves in a situation of 'obsolescing bargaining power', with very little means to reverse the situation.<sup>25</sup> By the 1840s this supply dilemma was partly resolved with the discovery of guano on several offshore islands on the southwest and eastern coast of Africa. These were geographically located in an area stretching from Ichaboe on the Namib coast to Algoa Bay on the Cape Colony's eastern coast. Unsurprisingly, a rush to monopolise the source, involving nationals from Europe and the USA, started.

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20 National Research Council, *Lost crops of the Inca: Little known plants of the Andes with promise for worldwide cultivation: Report of an Ad Hoc Panel of the Advisory Committee on Technology Innovation Board on Science and Technology for International Development* (Washington DC, National Academy Press, 1989), p. 1.

21 R Cushman, "The moon's vagina & the first guano lords: Fertilizer and fertility in pre-modern Peru" (Paper, Minisymposium des Zentrums für Umweltgeschichte, IFF, 1070, Wien, Schottenfeldgasse 29, 8 Oct 2007).

22 WM Matthew, "Peru and the British guano market, 1840-1870", *Economic History Review*, 23, 1970, p. 112.

23 WM Matthew, "Foreign contractors and the Peruvian government at the outset of the guano trade", *Hispanic American Historical Review*, 52(4), 1972, p. 603.

24 JV Levin, *The export economies: Their pattern of development in historical perspective* (Cambridge, Harvard University Press, 1960), p. 33.

25 M Bucheli, "The politics of vertical integration in extractive industries", *Business History and Political Economy*, 2007, p. 8 (available at [http://www.business.uiuc.edu/Working\\_Papers/papers/07-0112.pdf](http://www.business.uiuc.edu/Working_Papers/papers/07-0112.pdf), as accessed on 20 May 2008).

The availability of guano in a particular location depends entirely on the presence of certain guano-producing seabirds such as gannets, cormorants and penguins. Their geographical location is inextricably linked with a natural and very complex phenomenon called upwelling. Coastal winds' interaction, the ocean floor's marine erosion and the coastline's topography cause upwelling. During this process, dead plant and animal matter sink to the bottom of the sea where they start decaying to form a very rich layer of compost.<sup>26</sup> This rich compost on the seabed can only be utilised once it has reached the water's surface. The south-easterly wind blowing over the surface of the water causes a current to move away from the land and makes a deep depression in the water's surface, which is then filled up with deeper-lying water. In this way, the nutritious compost, piled up on the seabed, is forced up and can be utilised.<sup>27</sup> When this compost reaches the surface, it serves as essential food for certain pelagic fish species such as anchovy, pilchard, round herring and horse mackerel, in turn, serving as essential food for other fish, mammals such as whales, and seabirds like gannets, penguins and cormorants.

During the breeding season in summer, vast numbers of birds congregate to lay their eggs and to roost their chicks on the offshore islands of locations as diverse as Lobos, Guanape and Chinchá on the west coast of Peru, Banaba or Christmas Island, Nauru in the Pacific, and Malgas and Ichaboe Island in the Atlantic Ocean, within easy reach of Cape Town and Namibia. Upon the birds' departure, vast deposits of guano are left behind. These deposits and their chemical components are a vital source of nutrients for enriching the waters surrounding the islands, estuaries and the marine environment in general. The effluent from the islands resulting from the rains serves as a stimulant for the growth of phytoplankton, which serves as food for "intertidal community structures" such as mussels, crabs and other similar organisms.<sup>28</sup>

### **From the Cape Guano Ordinance to the British Seabird Preservation Act, 1845-1869**

During the nineteenth century, guano became commercial farmers' fertiliser of choice in the Cape Colony and abroad, due to its phosphate-richness and suitability for plant growth stimulation. Therefore, the existence of a

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26 H Snyders, "'Stinky and smelly – but profitable': The Cape guano trade, c. 1843-1910" (PhD, University Stellenbosch, 2011), p. 11.

27 P Joubert, "Opwelling is weskus se 'enjin'", *Custos*, 11(11), 1990, p. 42.

28 AL Bosman & PAR Hockey, Seabird guano as a determinant of rocky intertidal community structure, *Marine Ecology*, 32, September 1986, p. 248.

strong international guano market strongly foregrounded seabirds' economic importance and highlighted the value of its conservation to the benefit of commercial agriculture. From the onset, Cape Town-based businesses who collected the product from several islands within and beyond the Cape's colonial waters exported it to markets in Europe, Britain and Mauritius. In addition to better prices and higher sales in these markets, freight costs were relatively low. At a net selling price of £6.14 and shipped at £1 per registered ton at point of sale (island), guano earned a significant profit and a net gain of up to 18s.10d per ton.<sup>29</sup> Indeed the estimated income of guano sales for the mid-1850s came to £10 000.<sup>30</sup> Although guano in its natural form was sold to local farmers, the bulk of it (about 77 073 tons from Ichaboe in 1844) was exported to the overseas market.<sup>31</sup>

Due to various islands being within Cape territorial waters, the colonial administration under Governor Peregrine Maitland issued the Guano Ordinance (Ordinance 4) in 1845. Maitland's inheritance of a debt-ridden administration prompted this ordinance and "as he was assured by those occupying office at the time, without any resources for him to develop", was mindful of the need to find new income sources to fund his administration.<sup>32</sup> The Cape Colony, noted Gwaindepi, was still an evolving fiscal state and far from "fiscal modernity". A fiscal state per definition is one characterised by "the centralisation of government revenue, establishment of long term debt, commitment to welfare provision and the transition to a responsible, albeit limited government".<sup>33</sup> The only real instrument at Maitland's disposal at that point was the established right and privilege of colonial administrations to change policy – "a change both of principle and plan".<sup>34</sup> Guano's discovery on islands within the Cape's territorial waters offered his administration an

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29 See, for example, the testimonies contained in the report of the Select Committee (SC) on the workings of the Guano Islands in both 1861 and 1899, Cape Town Archives (KAB), Official Publications of the Cape Colony (AMPT PUB), SC, A.11-'61, Testimony, R.P. Dobie: 71 & 73; SC, A.30-'99: Cape of Good Hope: Report of the Select Committee on the workings of the guano islands: Testimony of Charles Curry, p. 8.

30 JL Meltzer, "The growth of Cape Town commerce and the role of John Fairbairn's Advertiser (1835-1859)" (MA, University of Cape Town, Mar 1989), p. 116.

31 R.S.F. [in the original], "Statistics of Guano", *Journal of the American Geographical and Statistical Society*, 1(16), Jun 1859, p. 181.

32 RW Murray, *South African reminiscences: A series of sketches of prominent public events which have occurred in South Africa within the memory of the author during the forty years since 1854, and of the public men, official and unofficial, who have taken part in them* (Cape Town, Juta, 1894), p. 99; H Snyders, "Guanopreneurs and the dynamics of policymaking in the Cape Colony, 1843-1845", *New Contree*, 83, 2019, pp. 1-23.

33 A Gwaindepi, "State building in the colonial era: Public revenue, expenditure and borrowing patterns in the Cape Colony, 1820-1910" (PhD, University Stellenbosch, 2018), p. 17; H Snyders, "Guanopreneurs ...", *New Contree*, 83, 2019, pp. 1-23.

34 RW Murray, *South African Reminiscences: ...*, p. 178; H Snyders, "Guanopreneurs ...", *New Contree*, 83, 2019, pp. 1-23.

immediate additional income source to benefit the colonial treasury. Under this dispensation, the administration sold guano from the Cape's territorial islands at £1 per registered ton.

By 31 December 1844, one month after the implementation of guano licenses for collection from islands within the Cape's territorial waters, the colonial treasury collected £1 276 without any significant capital outlay.<sup>35</sup> From December 1844 to December 1845 alone, the actual revenue collected from the islands (based on the sale of licenses to 174 ships) amounted to £46 682.10s.6d. Expenses for the same period, on the other hand, amounted to £4 200, highlighting the profitable nature of this industry.<sup>36</sup> The Cape government, therefore, gained a valuable supplementary income source and a "fortunate addition" of about £51 000;<sup>37</sup> resulting in increased optimism in local business circles (even among those businessmen and shipmasters who had initially opposed the licensing system) and calls that this income is utilised for the improvement of colonial infrastructure, in general, and the construction of a dry dock at Mouille Point, in particular.<sup>38</sup>

Given the Colony's diverse needs, guano income had to be spread over a wide range of functions including improving public infrastructure. Maintaining this readily available income (or "fortunate addition" as the Colonial Secretary described it) from a source under the authorities' sole control became a priority.<sup>39</sup> However, policing the geographically dispersed islands was difficult with the potential of guano- and egg-theft and the destruction of the birds and their habitat, a continued possibility. Such a situation had to be prevented at all costs as it was central to ensuring the trade's long-term profitability. Legislation to outlaw the wanton killing and disturbance of gannets, cormorants and penguins in the Cape Colony was, however, still decades away. Therefore, guano-collection during the 1840s was essentially a free-for-all with little regard to protecting and preserving seabirds and their natural habitat.

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35 KAB, Cape Archives Division (CAD) 2/1/1/63: C14/117, Letter, Assistant Archivist/RW Rand, 24 Sept 1948.

36 KAB, Colonial Office (CO) 525, Treasury and Audit Office/Colonial Office, Statement of Revenue and Expenditure of the Colony of the Cape of Good Hope, 1844; H Snyders, "Guanopreneurs ...", *New Contree*, 83, 2019, pp. 1-23.

37 KAB, CO 539, Treasury and Audit Office/Colonial Office, Statement of Revenue and Expenditure of the Colony of the Cape of Good Hope, 1845.

38 KAB, CO 564, Treasury and Audit Office/Colonial Office, Statement of Revenue and Expenditure ..., 1846.

39 J Burman & S Levin, *The Saldanha Bay story* (Cape Town, Human & Rossouw, 1974), p. 97.



Beyond making payment for guano collection mandatory, the Cape Guano Ordinance omitted any reference to the protection of seabirds, which, according to Cushman regarding the trade in Peru (South America), were the most valuable birds in the nineteenth-century world.<sup>40</sup> Other than declaring guano to be the British monarch's property, the ordinance failed to explicitly declare seabirds as subjects entitled to royal favour and protection. At that point, the trade was about mining as an economic resource such as guano (seabirds), eggs (penguins) or feathers for the millinery trade.

Guano collection dramatically impacted animal life (both seabirds and seals) on the various colonial islands and Ichaboe. The frantic human activity and physical scraping of the islands to the rocky bottom also disturbed the islands' very topography and the guano-producing seabirds' traditional nests and burrows.<sup>41</sup> Guano workers' primary task was the physical collection, bagging and guano loading with basic tools such as crowbars, spades and wheelbarrows. They constructed numerous improvisations such as a swinging platform and a primitive railway system to assist with loading and conveyance.<sup>42</sup> These activities and the constant movement of the labour force and the frequent use of firearms by the guano diggers to shoot seabirds as an addition to their daily diet created a noisy environment that rendered the islands uninhabitable and unsuitable for nesting purposes. From the outset, sailors were the primary source of labour. Groups of contracted non-seamen working under the supervision of supercargoes to speed up the loading process later supplemented the sailors' ranks. Therefore, the frightened seabirds deserted the islands, creating the impression that the guano trade had ended. However, this was not the case, given the superficial nature of the human disturbance. Guano collection only disturbed the birds' natural living environment but did not affect the pelagic fishing resources, which served as their main food source and therefore, the main reason behind their presence.<sup>43</sup> It is instinctive for these birds to return to their original habitat after a short absence as long as sufficient food is available.

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40 GT Cushman, "The most valuable birds in the world: International conservation Science and the Revival of Peru's guano industry, 1909-1968", *Environmental History*, 10(3), 2005 (available at <http://www.historycooperative.org/journals/eh/10.3/cushman.html> (as accessed on 1 Dec 2007).

41 A Payne & R Crawford, *Oceans of life off Southern Africa* (Cape Town, Vlaeberg Uitgewers, 1994), p. 270.

42 Ex-member of the Committee of Management [in original], "The African Guano trade: Being an account of the trade in Guano from Ichaboe, and other places on the African coast, more particularly the proceedings of the Committee of Management", *Nautical Magazine*, 16, 1845, p. 623; H Snyders & S Swart, "Discontented scoundrels who crowd the mercantile marine today: Labour relations regimes of the Cape and Ichaboe guano trade, c. 1843-1898", *Historia*, 58(1), May, 2013, pp. 51-73.

43 PD Shaughnessy, *Historical population levels of seals and seabirds on islands off Southern Africa, with special reference to Seal Island, False Bay* (Cape Town, Sea Fisheries Research Institute, 1984), p. 61.

Cape Town-based guanopreneurs participated enthusiastically and with a high level of greed in the stripping of the islands.<sup>44</sup> A reconstructed catch series for sealing compiled by David and Van Sittert indicated that during 1840-1860, which overlaps with the guano rush-era of 1843-1845, sealing continued unabated (though at a reduced rate) and took a backseat to guano collection. Based on export and import figures from the Namib islands, they concluded that this period contributed significantly to the export of 65 000 seal skins and the killing of almost two million seals in Southern Africa in the nineteenth century.<sup>45</sup> This disturbance, combined with guano collection, effectively rendered the island unproductive for at least one year.

Upon discovering substantial new deposits on Ichaboe in 1847, JS de Wolf & Company (based in Great St Helens, London and working from Liverpool) monopolised the island.<sup>46</sup> According to contemporary sources, poor market conditions, caused by an oversupply of guano and coupled with unscrupulous dealers' speculative activities, prevented them from fully exploiting their advantage. Poor financial decisions and speculative choices resulted in De Wolf's insolvency. The monopoly then passed into the hands of a loose grouping comprising the British-based companies of Gibson, Linton & Company, Lawrence Best & Company and two individual shipmasters, Captains Tompkins and Murray.<sup>47</sup> Working from their base in Liverpool, both companies faced high operational and transport costs. By 1850 Gibson & Linton filed for insolvency and disposed of their monopoly by selling it via their partner and manager, Captain Tompkins, to the Cape Town-based companies A & E de Pass & Company, Seawright & Company and Captain August Carrew.<sup>48</sup> Within the space of four years, Lawrence Best & Company suffered the same fate and, in turn, sold their shares to Thomson & Watson and R. Granger & Company of Cape Town. The Cape Town-based merchants were politically and socially influential due to their involvement and dominance in

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44 The late nineteenth century international guano trade was an essentially speculative activity because it was based on the collection and trade of a finite product founded on various offshore islands in both the Atlantic and Pacific Ocean. The quality of the product was entirely dependent on the right combination of chemical elements (phosphate, ammonia, nitrogen) essential for plant growth. The profitability of the entire industry depended on the adoption of a low-cost and labour-intensive system of operation. American historian Jimmy Skaggs coined the term "guanopreneurs" to distinguish this group of businessmen from other entrepreneurs in more sustainable industries. See Jimmy M Skaggs, *The great guano rush: Entrepreneurs and American overseas expansion* (London, St Martin's Press, 1994).

45 J David & L Van Sittert, "A reconstruction of the Cape (South African) fur seal harvest 1653-1899 and a comparison with the twentieth century harvest", *South African Journal of Science*, 104, Mar/Apr 2008), p. 110.

46 KAB, GH. 21/18, Angra Pequena Joint Claims Commission, Testimony of John Spence, 31 Mar 1885.

47 KAB, AMPT PUBS: CCP 1/2/1/9, S.C, A 11-'61, Testimony of T Boyce, 9 Jul 1861, p. 10.

48 KAB, AMPT PUBS: CCP 1/2/1/9, S.C, A 11-'61, Testimony, 11 Jul 1861, p. 51.

key colonial institutions such as the Commercial Exchange, Municipality of the City of Cape Town and the Cape of Good Hope Agricultural Society. They also maintained close links with the colonial political bureaucracy and had a special relationship with and direct access to the Governor.<sup>49</sup> These relationships were critical when the Colonial Governor's sole prerogative was policy formulation, drafting of regulations, and the administrative systems set up.<sup>50</sup> Indeed, noted Murray, "each of the Governors came with a policy of his own, arranged between himself and his Imperial superiors".<sup>51</sup> The existing colonial legislature through which citizens could channel their concerns, in turn, had neither the right to establish investigative commissions nor the power to subpoena witnesses to give evidence.<sup>52</sup> Importantly, these businessmen understood the value of protecting the birds and the need for the careful management of the island environment.

They agreed to a three-way division of the island and the implementation of a "proper season" of guano collection and treating the island as a nursery, safeguarding the resource and preventing further degradation.<sup>53</sup> In addition, they adopted a system of avoidance (for when the birds returned in May or June) by restricting activities and noise to the northern side of the island while leaving the south side undisturbed. They also attempted to curb the collection of penguin eggs. Once the breeding season was over, the island labour force was tasked with clearing away stones and carcasses to ensure suitable and stone-free guano dropping spaces. Private businessmen further transferred this mode of operation to most islands within the Cape territorial waters when the Maitland administration granted public leases.

According to Beinart, in a different context, environmental awareness and concern must, however, not be confused with protection for moral reasons. Within the idiom of mid-Victorian thinking, it would be more appropriate to refer to this approach as a realisation of the need to use the existing natural resources more wisely.<sup>54</sup> Indeed the notion of "freeing materials from their sources, making territory available to commerce and exploitation, generating

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49 D Warren, "Merchants, commissioners and wardmasters: Municipal and colonial politics in Cape Town, 1840-1854", *Argief Jaarboek vir Suid-Afrikaanse Geskiedenis*, 2, 1992, p. 15.

50 M George, "John Bardwell Ebdon: His business and political career at the Cape, 1806-1849", *Argief Jaarboek vir Suid-Afrikaanse Geskiedenis*, 49(1), 1986, p. 70.

51 RW Murray, *South African Reminiscences*:..., p. 177; H Snyders, "Guanopreneurs ...", *New Contree*, 83, 2019, pp. 1-23.

52 M George, "John Bardwell Ebdon ...", *Argief Jaarboek vir Suid-Afrikaanse Geskiedenis*, 49(1), 1986, p. 70; H Snyders, "Guanopreneurs ...", *New Contree*, 83(5), 2019, pp. 1-23.

53 KAB, AMPT PUBS CCP 1, SC, A. 11-'61, Testimony of Captain Sinclair, 9 Jul 1861, p. 18.

54 W Beinart, *The rise of conservation in South Africa* ..., p. 64.

revenue to justify colonial costs”, was an integral part of the general worldview of most Victorian businessmen.<sup>55</sup> At the same time, “attitudes conducive to the disinterested protection of wildlife” in general were, however, “still in its infancy”.<sup>56</sup> The protection of seabirds was thus clearly a matter of managing an economic resource for long-term prosperity consistent with the ‘moral ecology’, that is “beliefs, practices, and traditions that governed how ordinary rural folk interacted with the environment” of the time.<sup>57</sup>

For ease of mining and minimising general disruption and avoiding conflict between work teams, the islands along the Namibian coast were divided into three distinct operational zones by the individual work teams that a company headman supervised. All groups however shared the available landing stages and makeshift jetties.<sup>58</sup> Furthermore, the collectors fixed boundaries and drew maps to demarcate ownership.<sup>59</sup> Walls were built to keep the wind and sea at bay and timber fences erected to prevent penguins from entering the demarcated breeding areas.<sup>60</sup><sup>18</sup> The island workforce also killed seagulls when necessary to prevent them from stealing the other guano-producing birds’ eggs.<sup>61</sup> They also had to protect the island from unauthorised landings by possible competitors and enemies (following the principle of “defence of the whole and the protection of the whole”).<sup>62</sup> A fully armed boat were also kept on standby to discourage unauthorised landings.<sup>63</sup> These steps to avert an external attack, were supplemented with the appointment of Captain Carrew as Justice of the Peace in 1854 to provide law and order on Ichaboe Island. As the designated and shipmaster-appointed peace officer, he was tasked with enforcing regulations that Cape Town businessman, Aaron de Pass of the company A & E de Pass, drew up on behalf of all the island’s occupiers for this specific purpose.<sup>64</sup> These measures in the absence of official government control laid the basis for treating guano-producing seabirds as a national

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55 MT Bravo, “Review Essay: The geography of an empire licensed by providence”, *Annals of Science*, 59, 2002, p. 416.

56 W Beinart & P Coates, *Environment and history: the taming of nature in the USA and South Africa* (London, Routledge, 1995), p. 30.

57 K Jacoby, *Crimes against nature: Squatters, poachers, thieves, and the hidden history of American conservation* (Oakland, University of California Press, 2014), p. 3.

58 KAB, AMPT PUBS, CCP 1/2/1/9, SC, A.11-’61; Testimony of Sheperd, 5 July 1861, p.1.

59 KAB, Government House (GH) 21/18, Angra Pequena Joint Claims Commission, Testimony of John Gove, 20 Apr 1885.

60 KAB, GH 21/18, Angra Pequena Joint Claims Commission, Testimony of Christian William Pettersen, 20 Apr 1885.

61 KAB, GH 21/18, Angra Pequena Joint Claims Commission, Testimony of J Spence, 31 Mar 1885.

62 KAB, AMPT PUBS, CCP 1/2/1/9, SC, A.11-’61, Testimony of R. Granger, 11 Jul 1861, p. 52.

63 KAB, AMPT PUBS, CCP 1/2/1/9, SC, A.11-’61, Testimony of Spence, 9 Jul 1861, p. 26.

64 KAB, AMPT PUBS, CCP 1/2/1/9, SC, A.11-’61, Testimony of B. Sinclair, 9 Jul 1861, p. 19.

resource.<sup>65</sup> These measures remained in vogue until 1889, and laid the basis for the subsequent control and protection regime for government-controlled islands; within and outside the Cape's territorial waters.

Beyond these private measures, the Cape Colony lacked a formal bird conservation regime for a considerable period. Since Great Britain had never owned any guano islands that were explicitly mined to service the fertiliser industry,<sup>66</sup> the official protection of seabirds specifically for commercial reasons, was never an issue of governance. Like other birds, seabirds were regarded as legitimate objects for target shooting, a leisure past-time practised by the well-to-do in the Victorian world. In 1868, after a particularly bad season of slaughtering on the Yorkshire coast, a group of interested people under the leadership of the Reverend Henry Frederick Barnes-Lawrence, Vicar of the Priory Church of Bridlington, established the Association for the Protection of Sea-Birds, a broad alliance of local landowners, prominent clergymen and several Members of Parliament.<sup>67</sup> On 26 February 1869, one of its members in the House of Commons, Christopher Sykes MP, tabled a Bill for the Preservation of Sea Birds to give further impetus to their declared commitment. On this occasion and in support of the new legislation, Sykes made two claims. Firstly, he stated that his actions enjoyed the support of all classes of his constituents and secondly, that he was acting in the national interest (on behalf of the "thoughtless pleasure seekers" as he put it) to prevent the English coast from being turned into a "silent wilderness".<sup>68</sup> The significance of Sykes' actions, more than the veracity of his statements about broad-based support, is the issue here. The idea of promulgating a designated act to preserve seabirds specifically was a novel one and indeed the first such measure in Britain and its Empire to achieve this objective. The motivation behind its formulation – "preventing a silent wilderness" – displayed what Carruthers in a different context has called a "broader environmental sensitivity" which in turn, is a pre-condition for a long-term commitment to nature conservation.<sup>69</sup>

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65 RW Rand, *Die staatsghwano-eilande Voëls en Pelsrobbe. Pretoria: Departement van Landbou*, 1950, p. 10.

66 Those Britons interested in providing products to the fertiliser market and working on home soil, however, found the mining of coprolite a viable alternative. See Bernard O'Connor, "The origins and development of the British coprolite industry, *Mining History*, 14(5), 2001.

67 University of Hull Archives, Pressure Group Archives Subject Guide: Association for the Protection of Sea Birds (available at <http://www.hull.ac.uk/arc/collection/pressuregrouparchives/apsb>, as accessed on 15 Jun 2009).

68 House of Commons Debates (HCD), 26 February 1869, volume 194, columns 404-406 (available at <http://hansard.millbanksystems.com/commons/1869/feb/26/leave>, as accessed on 15 Jun 2009).

69 J Carruthers, "Changing perspectives on wildlife ...", *Society and Animals*, 13(3), 2005, p. 192.

The promulgation of the English Sea Birds Preservation Act during the year was not only in line with the thinking of British scientist Alfred Newton about extinction, but also a result of “sentiment ‘a right feeling – a feeling sanctioned by humanity, by Science, and by our own material interests’”, and one that opposed “wanton destruction by humans” because it was “neither good nor natural” and the “evil product of human ignorance”.<sup>70</sup> It further “sought to protect seabirds by prohibiting the taking of eggs between 1 March and 30 June and prohibiting their slaughter in summer (when the old birds had moulted and the young were not yet fledged to fly) between 31 May and 31 August”.<sup>71</sup>

Up to the 1870s, there was very little incentive for promulgating specific legislation to protect seabirds and, by implication, the international guano trade. This situation started to change against the background of increasing farming demand for cheap or subsidised fertiliser. The demand of emerging mining communities for staples like wheat and wine following the discovery of minerals in Griqualand-West in 1867, motivated the demand for cheap guano in the Cape Colony from the 1860s onwards. Eager to respond to the new market opportunities but constrained by the geophysical environment, Cape farmers with a commercial orientation, attempted to improve their land by importing chemical fertilisers. However, commodity traders, who started to sell cheap imported wheat,<sup>72</sup> flour and rice,<sup>73</sup> undermined their efforts to produce a surplus. Farmers in the principal wheat-growing districts of Stellenbosch, Malmesbury and Paarl established the Malmesbury Protection Committee (MPC) in 1869 to advance their interests and push for government intervention.<sup>74</sup>

The MPC, as interest-group demanded tariff protection, and a fair return on capital investment. As an organisation of wheat farmers, its limited membership and restricted geographical spread somewhat restricted its effectiveness. They, however, had direct access to a large number of public representatives in the colonial legislature. Their demand for a solid return

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70 HM Cowles, A Victorian extinction: Alfred Newton and the evolution of animal protection”, *The British Journal for the History of Science*, 46(4), 2013, p. 697.

71 R Clarke, *Pioneers of conservation: The Selborne Society and the Royal SPB* (London, Selborne Society, 2004), p. 4.

72 KAB, AMPT PUBS, CCP A.39, Printed paper of the House of Assembly, Cape of Good Hope, Report of the Select Committee on the Guano Islands, Oct 1899 (A.39-'99 Guano Islands), pp. 25-26.

73 M George, “John Bardwell Ebden:...”, p. 104.

74 H Giliomee, “Aspects of the rise of Afrikaner capital and Afrikaner nationalism in the Western Cape, 1870-1915”, WG James & M Simons, *The angry divide: Social and economic history of the Western Cape* (Cape Town, David Philip, 1989), p. 65.

on investments was also shared by a larger and a well-organised colonial business network who similarly believed in material progress, industriousness, business efficiency and private enterprise, and a bias for surplus as a source of income instead of subsistence.<sup>75</sup> Wine farmers and their organisation, the Zuid-Afrikaansche Boeren Beschermings Vereeniging (BBV)/South African Farmers' Protection Association (SAFPA) joined the fight for better economic policy eight years later. Formed in reaction to a new round of government-imposed excise duties on wine and spirits and "legislation oppressive to the farming community",<sup>76</sup> SAFPA stood for the protection, the advancement and promotion of farming entrepreneurship, and the general political and economic farming interests.<sup>77</sup>

Worsening economic conditions such as poor harvests during the 1880s created certain staple shortages and dependence on imported breadstuffs. The sale of wine, brandy and dried fruit on the Kimberley market also declined steeply. Following another poor harvest in the early years, wheat prices declined rapidly. With limited access to credit, farmers could not improve soil, product quality, mitigate natural disasters, diversify their operations or embark on a programme of mechanisation.<sup>78</sup> By 1888, wheat prices reached five shillings – an all-time low. An outbreak of *phylloxera* in the vineyards of the Boland further worsened the situation.

Faced with potential financial disaster, the agricultural community demanded state protection, official aid and assistance in fighting "merchants resisting protections under the banner of free trade".<sup>79</sup> The Cape Legislature Assembly, composed of a significant number of farmer representatives, relented and in July 1889 resolved to place all guano islands under state control to provide "purchasers with a good article at a reasonable price, and by this means encourage production, chiefly of grain, to a greater extent".<sup>80</sup>

### Useful animals – from game to seabird protection, 1889-1910

The first indication of greater sensitivity towards animals' treatment in the

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75 T Kirk, "The Cape economy and the expropriation of the Kat River Settlement, 1846-53", S Marks & A Atmore, *Economy and society in pre-industrial South Africa* (London, Longman, 1980), p. 237.

76 MAS Grundlingh, "The parliament of the Cape of Good Hope with special reference to party politics, 1872 to 1919", *Archives Year Book for South African History* (Pretoria, Government Printer, 1969), p. 184.

77 TRH Davenport & C Saunders, *South Africa: A modern history*, 5th edition (London, Longman, 2000), p. 108.

78 H Giliomee, "Aspects of the rise of Afrikaner capital ...", WG James & M Simons, *The angry divide ...*, p. 69.

79 H Giliomee, "Aspects of the rise of Afrikaner capital ...", WG James & M Simons, *The angry divide ...*, p. 75.

80 KAB, Cape of Good Hope (COGH), Votes and Proceedings of the Legislative Council, 2 Jul 1889.

Cape Colony dates back to the early 1800s when the colonial authorities started to enact measures to advance animal protection. Among the earliest legislation that signalled a new direction in animal-human relations in the Cape Colony, was the Game Law Proclamation (1822), the Amendment of Game Law: Elephants Act (1822) and Amendment of Game Law: Elands Act (1823). Almost six decades later, this amendment was followed by the Police Offences Act (Act 27 of 1882) that prohibited discharging firearms in animals' vicinity, wanton irritation and setting dogs on other animals. Section 5 of the said Act, specifically, made provision for the imposition of a maximum penalty of £2 or 30-days imprisonment of transgressors.<sup>81</sup>

The first piece of legislation with any reference to winged-animals, was the Game Law Amendment Act of 1886, which in addition to stipulating the different buck types to be protected, also provided for the protection of wild ostrich, peacock, pheasant, grouse and guinea fowl collectively called "game birds". This Act specifically protected from and regulated against the "wilful" destruction, disturbance, illegal or unauthorised collection and sale of the game birds' eggs and chicks' removal without permission. These transgressions were punishable by a fine of £4 for a first offence, and £8 for any subsequent transgression.

In close succession and within the scope of twelve months, Proclamation 202 which was to form part of the Game Act (Act 36 of 1886), made provision for a "close time or fence seasons for the [hunting of] different kind of game". From 1 August to 31 January, the "close season", it was unlawful to "kill, pursue, hunt or shoot at any of the kind of game specified" with or without a license.<sup>82</sup> Following stakeholders in the farming and non-farming sector's representations, this period was subsequently changed from 1 September to the end of February. No exceptions to the law were allowed, and even in cases where such game threatened to destroy crops and gardens, it was left to the Attorney-General to allow appropriate waivers of the sentence.<sup>83</sup> Thus when the Department of Crown Lands and Public Works took control of the Cape guano trade in 1890 in line with Resolution 2 of 2 July 1889, it started to operate within an environment wherein some form of animal protection was already institutionalised.

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81 KAB, COGH, Government Gazette, Police offences Act (Act 27 of 1882).

82 KAB, AGR 67, Proclamation No. 202, 1887.

83 KAB, AGR 67, 596, Assistant Law Adviser, Assistant Commissioner Crown Lands and Public Works, 17 Dec 1889.



Captain CH Jackson, appointed as the Government Guano Agent and Captain John Spence, his assistant, were responsible for the Cape guano islands' management and control. Whereas Jackson handled general administration, labour recruitment and the central guano depot management in Cape Town, the latter was tasked with supervising actual collection on the various islands. Both were veterans of the trade and intimately acquainted with the conservation measures that private entrepreneurs practised. As a result, they continued the established practices and banned the collection of penguin eggs and their killing for food since they represented the industry's future.<sup>84</sup> Their approach directly resulted in the passing of Proclamation 316 of 1891 as part of the stipulations of the Game Act (Act 36 of 1886) during the subsequent legislative session.<sup>85</sup> Under this Proclamation, the wanton killing and disturbance of gannets, cormorants and penguins were outlawed.<sup>86</sup> Under this measure, the designated seabirds were protected for three years – from 1 February 1891 until March 1894. Transgressions were punishable by a minimum of six months' imprisonment with the option of a fine.

The inauguration of the new guano administration intersected with a wave of agitation from the farming sector for the inclusion and protection of an ever-growing list of animals of importance to the colonial agricultural economy under the Game Act. Among these were the ant-bear and the locust bird. In the former case, representatives from the South African Museum, various divisional councils, and several game-protection associations, strongly appealed for ant-bear protection for three years. The Western Districts Game Protection Association, supported by 43 divisional councils,<sup>87</sup> cogently argued that since this animal (in their view) was the "only animal we know of that destroys the destructive white ant", its protection was justified.<sup>88</sup> In addition to noting that reports were received of the creature being used as a source of food or leather for the making of saddles, the South African Museum in Cape Town argued that "its extinction would be a scientific calamity".<sup>89</sup> Similarly, supporters of the white and black stork (small and great locust bird) and the secretary-bird, argued that these animals should be protected for their utility value since they were the natural enemies of locusts and field mice, both the

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84 H Snyders & S Swart, "Discontented scoundrels ...", *Historia*, 58(1), May, 2013, pp. 51-73.

85 H Snyders, "Guanopreneurs ...", *New Contree*, 83, 2019, pp. 1-23.

86 KAB, AMPT PUBS, CCP 1/2/1/82, Memorandum on the Working of the guano islands (G55-'92), 21 May 1891.

87 KAB, AGR 67, 596, Secretary: Divisional Council – Under Colonial Secretary, 7 Sept 1893.

88 KAB, AGR 67, 596, Honorary Secretary: Western Districts Game Protection Association – Secretary of Lands, Mines and Agriculture, 6 Feb 1893.

89 KAB, AGR 67, 596, Memorandum: Curator, South African Museum, 18 Nov 1890.

scourge of local agriculture.<sup>90</sup>

Confronted by these demands, the Secretary of Lands, Mines and Agriculture proposed that it might become necessary to consider including a provision of a clause in the existing legislation to provide for “extending the protection of Government to an animal peculiar to South Africa, inoffensive to any class of the inhabitants whether farmers or sportsmen and in real danger of becoming exterminated, more particularly by Natives”.<sup>91</sup> This proposal resulted in the passing of the Game Laws Amendment Act of 1892. Although protection was afforded to these and other inclusions, the Act, in essence, prioritised the protection of buck (game) and a small number of what was called “game birds” such as the quail and the Namaqua partridge, wild ostrich, peacock, pheasant, grouse and guinea fowl. It specifically designated a hunting season during which killing of these animals and birds was allowed.

With the activation of the Cape guano legislation by the Department of Lands, Mines and Agriculture in 1892, the local demand for guano escalated. Orders were received from both individual farmers, institutions and organised groups in all Colony regions – including the Swartland, Breede River, the Southern Cape and Albany in the Eastern Province. The prospective buyers also insisted on paying a uniform price, irrespective of the distance from the central guano depot in Cape Town. Since the new administration was still in its first collection season and lacked sufficient stock, it was difficult to set easily affordable prices.<sup>92</sup> High transport costs also added more complications. Most of the early orders, therefore, had to be declined. Following an extremely wet season in 1892-1893, which affected both the volume and quality of the available stock, farmers demanded a price reduction.<sup>93</sup> Under the prevailing conditions, the Colonial Government refused, much to the displeasure of organised farming.

In a meeting held in Malmesbury in late 1892, the MPC resolved to demand that parliament lower the guano price to £6 per ton.<sup>94</sup> They further demanded credit sales, the appointment of official guano-sellers, the elimination of private sellers, the use of convicts as guano labour as a cost-cutting measure

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90 KAB, AGR 67, Peringuey Memorandum on the Birds in Mr Du Plessis' Game Laws Amendment Act, 13 Jul 1892.

91 KAB, AGR 67, Secretary for Land, Mines and Agriculture – Under Colonial Secretary, 22 Sept 1892.

92 KAB, AGR:231, 2153, Assistant Commissioner of Crown Lands & Public Works – W Mason, Secretary of the Knysna Political Association, 9 July 1891.

93 KAB, AMPT PUBS, CCP 1/2/1/85, G58-'93.

94 “De guano kwestie – een deputasie van Malmesbury en Omstreken”, *De Zuid Afrikaan*, 17 Jan 1893.

and, significantly, the guano commission system's termination.<sup>95</sup> Spearheading this protest in the legislature from January 1893 onwards was a group of high-profile farmer-politicians, including A Louw (MLA for Malmesbury), D De Waal (MLA for Cape Town), Z De Villiers (MLA for Paarl), J Van der Spuy (MLA for Koeberg) and S Walters (Piketberg). They represented a strong agricultural constituency and their demands effectively divided the legislature with its diverse group of public representatives who similarly represented certain defined economic and regional interests. As a compromise, the colonial government committed to sending a proposal to the legislature about lowering the guano price during its next sitting in 1895. However, Louw, the local representative, vowed to continue to fight and demanded an even further price reduction to £5 per ton.

To address the significant gap between supply and demand and address other matters that also impacted the trade such as the continued killing of seabirds and egg-collection by unauthorised persons, the colonial administration, specifically the Department of Lands, Mines and Agriculture, published Proclamation 499 in December 1893. This measure laid down specific rules and regulations for the protection of seals and seabirds.<sup>96</sup> After 1894, the protection of certain seabird's classes was further extended under the stipulations of the Fish Protection Act (Act 15 of 1893). This measure explicitly prohibited unauthorised landing on the islands for sealing and egg collecting. It also placed a ban on the use of firearms, nets and boats for these purposes.<sup>97</sup>

A local farmer in the Knysna District, Samuel A Deacon, discovered bat guano within caves located on government land close to the Storms River Mouth amid the colonial government and farmers' tug-of-war about cheaper and subsidised guano. Bat guano, known for its high concentrations of nitrogen and phosphorous<sup>98</sup> and used in the manufacturing of gunpowder in the USA, formally entered the world of fertilisers as far back as 1876, following a report about its effectiveness in the popular magazine, *Scientific American*.<sup>99</sup> Although earlier Australian reports mentioned its use in sugar-cane farming in the West Indies, its potential for agricultural purposes was seemingly not immediately

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95 "Guano", *Oms Land*, 17 Jan 1893.

96 KAB, COGH, Government Gazette: Proclamation no. 499, Rules and Regulations for the Protection of Seals and Seabirds, 27 Dec 1893.

97 KAB, AMPT PUBS, CCP 1/2/1/90, Memorandum on the working of the guano islands (G66-'94).

98 M Kasso & M Balakrishnan, "Ecological and economic importance of bats (Order Chiroptera)", *ISRN Biodiversity*, Nov 2013, p. 5.

99 "Bat guano", *Scientific American*, 35(9), Aug 1876, pp. 136-137.

grasped.<sup>100</sup> Four years earlier, Poland extended legal protection to both birds and bats. They were followed by the Netherlands four years later with their *Wet van 25 Mei 1880, tot Bescherming van Diersoorten, nuttig voor Landbouw of Houtteelt* (Act for the Protection of Animal Types Useful to Agriculture and Wood Cultivation). Economic considerations purely drove these measures since they provided farmers with affordable means to control insects harmful to agriculture and obtain free excrement for fertiliser purposes.<sup>101</sup> Deacon's discovery and subsequent request for chemical analysis of a sample were thus well-founded. Although the analysis' results disqualified the product as 'guano' and described it as little more than "a rich soil" that "would not pay to use it on a larger scale as a manure",<sup>102</sup> was potentially still exploitable and could be mined profitably by following a low-risk approach involving minimal capital commitments, and working of the caves as individual "business units" using low-cost labour.<sup>103</sup> Against this background HG Fourcade, a nearby farmer started to exploit the source for commercial reasons.<sup>104</sup> Consequently, the bat guano trade and bats' potential as useful animals became an integral part of developing legislation.

Despite the legislation to secure a sustainable supply of guano, shortfalls continued to occur and intensified the battle between farmers and the colonial parliament. In the immediate period before the start of the Anglo-Boer War (South African War), the authorities acceded to at least one price reduction (1896) and the appointment of two investigative commissions into the guano islands' management (1897 and 1899). It also stopped guano exports to the Orange Free State, Transvaal and Lorenzo Marques to better service local farmers. During the Anglo-Boer War, the colonial authorities also establish several depots at various railway stations to ensure a sustained supply during the war (1899-1902). Notwithstanding, shortages continued. Seabirds, the main producers of the product, however, continued their protected status. This period also saw the Bird Protection Act (Act 42 of 1899) passed. Under this Act, protection was extended to wild birds, including pigeons<sup>105</sup> and the fiscal shrike,<sup>106</sup> inaugurating the Cape Colony's

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100 "Guano", *Cornwall Chronicle* (Launceston, Tasmania), 26 Sept 1849.

101 AM Voûte & C Smeenk (eds.), *Vleermuizen* (Zwolle, Waanders Uitgevers, 1991), pp. 129-130.

102 KAB, AGR 236, 2299, JC Rademeyer: Analyst – Secretary for Lands & Agriculture, 28 Oct 1892.

103 C Van Onselen, *Chibaro: African mine labour in Southern Rhodesia, 1900-1933* (Toronto, Canada, Longwood Publishing Group, 1976), pp. 21;100.

104 KAB, PAS 2/799, L73/C/51, Charl W Malan – Minister of Agriculture, 10 Jul 1919.

105 KAB, COGH, Act 22 of 1907, Protection of Wild Birds Act as amended.

106 KAB, Municipality of Cape Town, 3/CT: 4/1/1/51, Under Secretary of Agriculture – Town Clerk of Cape Town, 26 Sept 1903.

shift towards protection as a moral, rather than an economic imperative.

## Conclusion

In the aftermath of the war, the supply constraints deepened; forcing many farmers to resort to the use of imported chemical fertilisers. By 1906 these imports from suppliers in England and Europe alone reached 12 337 tons.<sup>107</sup> Attempts by unscrupulous dealers to exploit the insatiable demand for fertiliser by starting to sell inferior and ‘fake’ guano and compounds “adulterated by art”,<sup>108</sup> was countered by the Cape government promulgating an Act to Regulate the Sale of Fertilisers, Farm Foods, Seeds and Pest Remedies (Act 20 of 1907, known as the Fertiliser Act) that provided for inspections, obligatory chemical analysis and penalties for transgressions.<sup>109</sup> At the dawn of Union, Proclamation 498 of 1909, stipulated new conditions for landing on the bird and seal islands, killing and handling animals, and penalties for the unauthorised killing and disturbance of seals and birds.<sup>110</sup> Farmers, as a result, continued to agitate for cheaper sources of fertilisation. Following the further discovery of bat guano deposits in Transvaal, Orange Free State and on the Southern Cape coast in addition to those during the first decade of the new century before Union, new appeals were directed to the recently-installed Union Department of Agriculture requesting it to make a proper assessment of the product’s quality and its potential commercial value.<sup>111</sup> Based on these results, new measures followed. According to Section 14 of Proclamation 136 of 1915, the Food & Fertilizers Act (Cape Act 20 of 1907) was amended and extended to cover bat guano. It formally reserved the term “guano” for “the nitrogenous excreta of [both] seabirds and bats” and that in the case of the latter, the term ‘guano’ be “preceded by the qualifying term ‘bat’”.<sup>112</sup> Under

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107 F van Rhyn Greef, “Die Suid Afrikaanse kunsmisbedryf: Struktuur, gedrag en prestasie” (PhD, UP, October 1983), pp. 73; 75.

108 Anon., “Agriculture: On the application of manures”, *The Cornwall Chronicle*, Dec 1845, p. 6. See also Anon., “Our French agricultural letter”, *Border Watch* (Gambier, South Australia), 4 July 1874; “Commercial fertilisers: What are they? Guano, ammonia and phosphates”, *Australian Town and Country Journal* (Sydney), 14 Jun 1890, p. 22.

109 New South Wales (Australia) promulgated a *Fertilizers Adulteration Act* in 1904. This legislation came into operation a year later and served as a model for the Cape Colony’s legislation. In the USA, the state of Maryland passed a guano inspection law as far back as 1853. See, for example, P Leshner, “A load of guano: Baltimore and the fertilizer trade in the nineteenth century”, *The Northern Mariner/ le marin du nord*, 18(3-4), Jul-Oct 2008, pp. 121-128.

110 KAB, COGH, Government Gazette, Proclamation No. 498 of 1909, 30 Nov 1909.

111 National Archives of South Africa (NASA), Pretoria, Transvaal Archives Division (1900-1919) (TAD), G431, 1729/04, RTA Innes: Transvaal Meteorological Department – FB Smith: Director of Agriculture, 1 Sept 1904.

112 NASA, Central Archive Repository (SAB), Department of Justice (JUS), 433, 1/10/17, Regulations Governing the Sale, Analysis, and Examination of Fertilizers, Farm Foods, Seeds, and Pest Remedies in the Province of the Cape of Good Hope, No. 36 of 1915, 30 Oct 1915.

the new law, the product not only had to be registered as a fertiliser, but its testing, sales and marketing were subjected to the same requirements and stipulations that applied to the handling and management of seabird guano. Ironically, unlike seabirds, protection was, not extended to bats.

Based on the events and legislative outcomes mentioned above, it is clear that the establishment of nature conservation in South Africa was the result of the efforts of private businessmen, the colonial state, and farmers who were initially driven by well-defined self-interest. The end of the century saw a convergence of the economic with the moral imperative. A society in flux and in the process of building its governance structures and systems, the Cape Colony, when confronted with the issue of balancing economic concerns with moral issues, took its principal cue from Britain. However, it also appropriated successful interventions from others to aid its evolution from an administrative entity fully-controlled from the metropolis to an autonomous geopolitical entity in full control of its affairs. Guano-producing birds in this process, became key mediators on the road of moving Cape agriculture towards full commercialisation, the Colony's evolution towards becoming a fiscal state, the introduction of science into its administrative processes and developing the required accountability systems to appropriately respond to the legitimate demands of its core constituencies inclusive of business, farmers, political pressure groups and others. Importantly, it also laid the foundation for the future South African state to manage its relationship with nature appropriately.