

# Between Extinction and Dispossession

## A Rhetorical Historiography of the Last Palestinian Crocodile (1870–1935)

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### Abstract

This article presents a rhetorical historiography of the last Palestinian crocodile, tracing its circulation across colonial zoological literatures between 1870 and 1935. This was the historic period of colonial zoologists' speculation about Palestinian crocodile extinction, and by extension, the whereabouts of the last Palestinian crocodile. The article argues that the Palestinian crocodile extinction story is intertwined with violent histories of colonial resource extraction, racialized labor exploitation, and indigenous human dispossession. By tracing the last Palestinian crocodile's rhetorical circulation to 1935 – when a Zionist zoologist declared that Palestinian crocodiles were finally extinct – the article connects Palestinian crocodile extinction with the British Mandate and the Palestine Jewish Colonization Association (PJCA)-led drainage and destruction of the crocodile's former habitat and the dispossession of the Ghawarna who lived on that land.

### Keywords

Crocodile; extinction; historiography; Palestine; zoology; Nakba; Zionism; Jisr al-Zarqa; marsh drainage.

Clarence the crocodile drifts about lazily in the thick summer heat, slowly submerging and resurfacing in his soupy pea green pond.<sup>1</sup> It is a midsummer day at the Tisch Family Zoological Gardens in West Jerusalem. The zoo, known locally as Gan HaChayot HaTanachi or the “Biblical Zoo,” prides itself on its

multiculturalism and “inclusivity” toward Palestinian visitors from occupied East Jerusalem.<sup>2</sup> Despite the heat I linger in front of Clarence’s enclosure, hypnotized. My morbid daydreams about getting ensnared in Clarence’s jaws are interrupted by a glance at the informational poster to my left. It is one of three posters positioned between the windows that look out onto Clarence’s enclosure, quite literally framing visitors’ perceptions of the crocodile on the other side of the glass. Visitors learn that while Clarence is not from Palestine, Nile crocodiles once lived in Palestine’s Mediterranean coastal marshlands. The poster narrates the Nile crocodile’s regional extinction in late Ottoman Palestine, beginning with a brief account of the last crocodile’s demise: “In 1905, the last crocodile was hunted in Israel by residents of [the Palestinian village] Jisar-A-Zarka.”<sup>3</sup> “We must do everything,” the poster concludes, “so that the small amount of wildlife still found in our region will not meet the same fate as that of the Nile crocodile.”<sup>4</sup>

The Biblical Zoo’s account erases the web of historical relations that led to this extinction beginning with one crucial fact: the market for late Ottoman Palestine’s small and dwindling crocodile population was overwhelmingly driven by colonialists rather than the indigenous population. By invoking and isolating the Palestinian identity of the hunters who allegedly killed the last crocodile, the Israeli zoo poster implies that Palestinians were responsible for Nile crocodiles’ regional extinction. This historical narrative hinges on the last crocodile’s symbolic singularity; the demise of the last living member of a species marks extinction through “a singular body and a singular moment.”<sup>5</sup> Yet, the bodies of scientific literature and taxidermy that they left behind demonstrate that scores of colonial zoologists wished to acquire a “last Palestinian crocodile” from the Zor al-Zarqa/Kabbara marshlands.<sup>6</sup> Several “last Palestinian crocodiles” – that is, crocodiles hunted when the local population was at the brink of extinction – remain to this day in British, German, and Israeli collections. The last Palestinian crocodile, therefore, is a dynamic rhetorical figure rather than a singular specimen.

In this article, I conduct a rhetorical historiography of the last Palestinian crocodile,<sup>7</sup> tracing its circulation across colonial zoological literatures between 1870 and 1935. This was the historic period of colonial zoologists’ speculation about Palestinian crocodiles’ extinction, and, by extension, the whereabouts of the last Palestinian crocodile. As with the rhetorical figure of the last crocodile, I approach extinction as both “a material reality and a cultural discourse that shapes popular perceptions of the world.”<sup>8</sup> I contextualize my critical engagement with the colonial scientific archive with Palestinian-authored scholarship from this historic period, as well as ethnographic interviews with local historians from Jisr al-Zarqa whose ancestors, members of the Ghawarna community, lived in the Zor al-Zarqa/Kabbara marshlands. Colonial zoologists’ approach toward extinction perpetuated an unjust social order.<sup>9</sup>

To date, rhetorical studies scholarship on Palestine has largely focused on overtly “political” texts such as politicians’ speeches and journalistic media. Regional archives of scientific communication, such as those at the heart of this article, are saturated with the persuasive tactics and power relations that are central to rhetorical

study. Through its analysis of extinction rhetoric, this article attenuates pernicious forms of “slow violence” against Palestinian life and land that are not easily captured in news headlines.<sup>10</sup> This article also contributes to the growing field of Palestinian environmental historiography, and, more broadly, the environmental historiography of the modern Middle East, by drawing attention to how animal extinction contributed to the remaking of Palestine’s landscape during a critical period in Palestine’s environmental, economic, and political history.

The Palestinian crocodile extinction story is intertwined with violent histories of colonial resource extraction, racialized labor exploitation, and indigenous human dispossession. By tracing the last Palestinian crocodile’s rhetorical circulation to 1935 – when a Zionist zoologist declared that Palestinian crocodiles were finally extinct – I connect the story of Palestinian crocodile extinction with the British Mandate and Palestine Jewish Colonization Association (PJCA)-led drainage and destruction of the crocodile’s former habitat and the dispossession of the Ghawarna who lived on that land. In contradiction to the Biblical Zoo poster, it was only after the wetlands were drained that the PJCA transferred the Ghawarna community to Jisr al-Zarqa, newly created on a fraction of the Ghawarna’s ancestral lands. The Jisr al-Zarqa community leaders’ research into these violent historical events further exposes how settler-colonial environmental policies have detrimentally impacted their ways of life. As I argue in the conclusion, these community leaders’ place-based research also presents alternative pathways for valuing the lives and loss of nonhuman species in Palestine.

## What Is a Palestinian Crocodile?

Scientists generally presume that the crocodylian species in Palestine was the “true” Nile crocodile, *Crocodylus niloticus*.<sup>11</sup> These are the most common crocodiles and among the most notorious of all crocodylians due to their large size, aggressiveness, and tendency to eat humans. They are indigenous to the African continent, including but not exclusively the Nile River that appears in their Latin taxon name.<sup>12</sup> Nile crocodiles had a relatively small habitat in Palestine, which was the northernmost terrain where this species was found in the wild.<sup>13</sup> The crocodiles lived in marshlands and rivers along the Mediterranean coast, primarily in an area located just north of Caesarea and just south of the southern slope of the Carmel mountain range.

From a zoogeographical perspective, the presence of Palestinian crocodiles and their small habitat is fairly unsurprising. Due to its location in the Great Rift Valley and at the juncture of three continents, historic Palestine is exceptionally biodiverse. It contains two primary climatic regimes and approximately twenty-three distinct ecosystems.<sup>14</sup> Nonetheless, both before and after their regional extinction the crocodiles have consistently been treated as an ecological anomaly. In numerous lively origin stories, Palestine’s crocodiles are framed as an introduced species that was transported to the Mediterranean coast as property from Egypt by one of several waves of human conquerors: Greek, Roman, or Egyptian.<sup>15</sup> Most of these origin stories, which primarily

circulated orally and have only sporadically been documented in writing, relate to the ruins of prior civilizations and corresponding place names that remain embedded in the coastal landscape. They highlight Palestinian crocodiles' longstanding, layered, and occasionally violent relationship with regional human and nonhuman ecology.

Building upon these narrative traditions and the ecocriticism of Palestinian and allied intellectuals including Raja Shehadeh, Mazin Qumsiyeh, Sandi Hilal, and Alessandro Petti, my decision to identify the crocodiles as "Palestinian crocodiles" is not only pragmatic but political.<sup>16</sup> Pragmatically, I refer to the crocodiles as "Palestinian" to clarify the geographic range of the Nile crocodile's regional extinction for the purposes of this study – that is, from their habitat in historic Palestine. The colonial zoological literature composed during the late Ottoman and British Mandate periods that I address in this article often refer to the crocodiles as Palestinian even though "Palestinian crocodiles" was not (and never has been) a scientifically recognized species classification. By using the term "Palestinian crocodiles" across historic timescales and into the present, I also aim to foreground the crocodiles' historic and ongoing place-based relationships with the land's indigenous inhabitants. Palestine's crocodiles are perpetually entangled in "naturecultures" – real or imagined – that do not readily lend themselves to fantasies of a pristine, empty land or an original biblical past.<sup>17</sup>

## **Palestinian Crocodiles' Habitat**

In the late nineteenth century, the crocodile was one of a multitude of species that inhabited and drew sustenance from the Zor al-Zarqa/Kabbara marshlands.<sup>18</sup> Naming these historic multispecies relations is crucial in order to move past an isolated and decontextualized understanding of the impact of the crocodile's extinction. As apex predators, the crocodiles' formidable appetite helped regulate the marsh ecosystem. They feasted on crustaceans, frogs, fish, migrating birds, and – according to European researchers – livestock that came to drink from the Zarqa river.<sup>19</sup> The crocodiles were also a food source for other species. In one of the most iconic of symbiotic interspecies relationships, spur-winged plovers would have daintily picked leftover meaty tidbits from the crocodiles' open mouths, cleaning the crocodiles' teeth in the process.<sup>20</sup> Crocodile eggs and hatchlings were eaten by otters.<sup>21</sup> Mosquitoes – which thrived in the still waters – sucked blood from crocodiles and from all the other living, blood-filled beings that moved through the marshes.

The marshlands were also a source of economic and cultural sustenance for Palestine's human population. The freshwater Nahr al-Zarqa, known for its clear blue waters, was used for drinking and agriculture.<sup>22</sup> Marsh water powered a flour mill that operated at the edge of a Roman-era stone dam in the marsh.<sup>23</sup> The marshlands were in close proximity to Caesarea and multiple Palestinian villages. Beginning in 1882, they were also adjacent to one of the earliest Zionist settlements, Zikron Yaakov. The marshlands themselves were home to two communities of Bedouin origin, 'Arab Kabbara and 'Arab al-Ghawarna, who lived in tent encampments and caves in the

marshland's rocky hills.<sup>24</sup> The Ghawarna, who are blamed for crocodile extinction in the Biblical Zoo plaque and whose descendants still live in the area today, are central figures in the analysis that follows.

'Arab al-Ghawarna roughly translates to "people of the lowlands" or "marshes." For reasons of social status intertwined with their marshland dwelling-place, the name carries a fraught and at times stigmatized history.<sup>25</sup> The Ghawarna who lived in the Zor al-Zarqa/Kabbara marshlands were primarily members of the 'Ammash and Jurban families.<sup>26</sup> As recounted to me by the local historian Mohamad Hamdan and the environmental and community activist Saidah al-



Figure 1. The marshlands as represented in C. R. Condor and H. H. Kitchener, *Palestine Exploration Fund Map* (PEF, 1879), Sheet VII.

Ali – who live in Jisr al-Zarqa and are descendants of the original families – the Ghawarna earned a living raising water buffalos and weaving mats from the marsh's abundant supply, springy reeds.<sup>27</sup> They were also renowned as hunters.<sup>28</sup> Palestinians of Sudanese descent were also affiliated with the Ghawarna during this period. Indeed, the marshes have been described as a quasi-Maroon community that welcomed individuals who were marginalized elsewhere or fleeing violence.<sup>29</sup> Their blackness – and the "darkness" of the Ghawarna more generally – was the subject of repeated, disproportionate fascination in the writings of colonial researchers who came to hunt crocodiles and document marshland flora and fauna.

## Colonial Zoology in Palestine

By now it should be clear that late nineteenth- and early twentieth-century Europeans did not "discover" Palestinian crocodiles, even by their own Eurocentric epistemological standards. Apart from the marshlands milieu that I described above, accounts of Palestinian crocodiles circulated even further through Palestinian-authored scholarship by the likes of Abdullah Mukhlis and Stephan Hanna Stephan.<sup>30</sup> However, the drive to systematically kill and collect Palestinian crocodiles as exotic commodities – and by extension, a fixation on the last Palestinian crocodile – appears to have been primarily driven by colonial forces. To date, I have not come across evidence of either

a widespread Palestinian tradition of hunting the crocodiles that extended beyond the Ghawarna who lived in the marshlands or an extensive Palestinian consumer market for Palestinian crocodile byproducts during this period. This is not surprising, since by all accounts the crocodile population in Palestine was small and localized. Efforts to recover and address historical Palestinian human-crocodile relations are complicated by the dispossession and decimation of surrounding Palestinian cities and villages during the Nakba.<sup>31</sup> Apart from the Ghawarna, these coastal communities were in closest proximity to the crocodiles and therefore would have been most likely to incorporate crocodiles into their economic and cultural infrastructures. While sensitive to these violent historical erasures, my claims are informed by interviews with community historians in Jisr al-Zarqa and surveys of local hunting practices and economic exports that were authored by Palestinian and European scholars during this period.

The relationship between imperial science, natural resource extraction, and territorial expansionism during the late Ottoman and British Mandate periods is well-documented. This imperial-ecological phenomenon has been identified and critiqued in the accounts of travel writers and colonial administrators who, in their hunt for biblical ruins, ignored or erased Palestine's exceptionally rich biological and human diversity.<sup>32</sup> They described Palestine as a desolate land that was in dire need of ecological management and improvement. In comparison, colonial zoologists and collectors saw and appreciated Palestine's bountiful plants and animals as objects of scientific inquiry. This scientific appreciation was inextricable from imperialist ambitions and the drive for profit. There were no wildlife protection laws in Palestine until 1924,<sup>33</sup> which was after crocodiles' likely regional extinction, and even then, the laws were loosely enforced.<sup>34</sup> Colonial zoologists not only observed and wrote about Palestinian animals in their natural habitat. The act of zoological speculation was one of extraction and commodification.<sup>35</sup> Euphemistically termed processes of "collection" involved a network of human and nonhuman actors, whereby colonial zoologists hunted and killed Palestinian animals, studied them, and transported their remains to collections.

While several prominent colonial zoologists maintained private collections in Palestine, the main colonial markets for Palestinian specimens were in Western Europe and the United States.<sup>36</sup> The nineteenth century was the heyday of natural history and taxidermy production. Taxidermy animals from colonial landscapes, especially wild and ferocious predators, were coveted by European museums and private collectors alike.<sup>37</sup> This mania extended to specimens from the "Holy Land," a domain where "the European public was more convinced that they had 'rights of ownership' . . . than . . . any other non-European territory."<sup>38</sup> This overarching exceptionalism and entitlement was intensified by competitiveness between European nations jostling to establish their scientific dominance over Palestine and each other.<sup>39</sup>

Holy Land taxidermy served several objectives. Because species from tropical or subtropical climates rarely survived in European menageries, taxidermy enabled European researchers to study animals from Palestine's distant colonized terrain. And

in the precinematic era, taxidermy facilitated visual displays of power to broader European publics. Natural history museums with public education programs were widespread, especially during the late nineteenth and early twentieth centuries.<sup>40</sup> As both animal and man-made objects, taxidermy “asserted not only a [nation’s] rule over natural resources and its discovery of new beasts but also its innovation and scientific knowledge.”<sup>41</sup> Disemboweled, stuffed with wire and flax, and then displayed in glass cases, Palestinian animals were reanimated as spectacles for the viewing pleasure of museumgoers in London and Berlin.

## “Last Palestinian Crocodile” in Colonial Zoological Literature

While aligned with these broader trends, the colonial commodification of Palestinian crocodiles was distinct. It cannot be conflated with other Holy Land species. For nearly half a century, colonial zoologists speculated endlessly about the origins and extinction status of Palestine’s near-obsolete crocodile population. This speculative line of inquiry consistently centered on the whereabouts of the enigmatic last Palestinian crocodile.

For example, although they were published thirty-six years apart, Henry Baker Tristram’s 1884 entry in *Flora and Fauna of Palestine* and George Buchanan Gray’s 1920 *Palestine Exploration Quarterly* (PEQ) article begin on this near-identical note.<sup>42</sup> They proclaim that the extinction status of Palestinian crocodiles is a great unresolved mystery, and they analyze evidence of the crocodiles’ existence. This “evidence” was the last few Palestinian crocodiles that other colonial scientists allegedly saw and occasionally successfully captured and killed in the Zor al-Zarqa/Kabbara marshlands. Both authors then recount their own laborious efforts at procuring a last Palestinian crocodile (Tristram was successful and Gray was not). The striking repetition across these accounts demonstrates how colonial zoologists’ speculation about crocodiles’ extinction status consistently translated into a drive to kill lingering last crocodiles rather than conserve them. It also demonstrates how speculation about the last crocodile was an ongoing genre convention in colonial literatures on Palestinian ecology.

Even among naturalists, the allure of the last Palestinian crocodile surpassed the confines of zoological inquiry and extinction science; it adapted a symbolic, even mythical quality. “Figures,” Donna Haraway explains, “are at the same time creatures of imagined possibility and creatures of fierce and ordinary reality; the dimensions tangle and require response.”<sup>43</sup> As with all rhetorical figures, the last crocodile’s persuasive power – its ability to invite identification and compel audiences to action – depended upon “shared meaning.”<sup>44</sup> As it circulated across colonial scientific literatures, it reflected and refracted the values and aspirations of colonial publics.

I use the phrase “colonial publics” (rather than, say, “scholarly” or “scientific”) to foreground the markedly colonial sensibilities that propelled European zoologists toward sustained speculation about the crocodiles’ extinction status for such an extended time period despite the crocodiles’ relatively small habitat. After all, this was not a microscopic insect that they were pursuing but a rather large reptile. Species

extinction is a gradual process that is often difficult to quantify. Nonetheless, I argue that colonial zoologists' ongoing speculation about Palestinian crocodile extinction necessitated a degree of willful (or internalized) unknowing.<sup>45</sup> Here I am referring to colonial scientists' detachment from how local populations lived alongside Palestinian ecology, as well as colonialists' mistrust and condescension toward Palestinians even as they depended heavily upon Palestinians' ecological expertise.<sup>46</sup> Colonial scientific literature on Palestinian animals frequently perpetuated the racist, historically inaccurate outlook of "science for the West, myth for the rest."<sup>47</sup> Yet colonialist writings on the last Palestinian crocodile reflected their own symbolic attachments and investment in mythical thinking.

A simple, yet powerful, illustration of the colonial dimension of this speculative project is Stephan Hanna Stephan's comparative disinterest in either speculating about the crocodiles' extinction status or participating in mythmaking surrounding the last crocodile, even as he published alongside European scholars. Like several of his Palestinian colleagues, Stephan published his scholarship in the *Journal of the Palestine Oriental Society (JPOS)*, thereby destabilizing reductive dichotomies between European and Arab scholarly inquiry during this historic period.<sup>48</sup> Stephan included a crocodile-related Arabic saying in his 1925–28 *JPOS* article series, "Animals in Palestinian Folklore," where he referenced Palestinian crocodiles' existence and extinction status in a succinct footnote: "Crocodiles were until the middle of the last century met with in the Kishon (*nahr il-muqatta*')." <sup>49</sup> Although colonialists were still fervently speculating about the whereabouts of Palestinian crocodiles in the 1920s, Stephan quite straightforwardly dated the crocodile population's downturn, if not their total demise, to the mid-nineteenth century.<sup>50</sup> Since Stephan composed the article from his scholarly vantagepoint as a Palestinian folklorist, it is safe to assume that the mythical figure of the last Palestinian crocodile did not carry immense significance in Palestinian animal folklore during this period.

Why did Palestinian crocodiles – especially the last crocodile – attract so much attention from colonialists? What did they find so intriguing about this small, localized, and rapidly dwindling (if not entirely extinct) population? There is no singular answer. The last Palestinian crocodile was a highly elastic rhetorical figure.<sup>51</sup> Its ongoing circulation across colonial zoological literature was fueled by its exceptional conceptual and material dynamism. In what follows, I organize my analysis of the last crocodile's key iterations across a series of categories that cut across its scientific and cultural, material, and imaginative properties. I demonstrate how the last crocodile's *properties* (its attributes or qualities), along with its status as *property* ("a thing belonging to someone") figured as modes of value-extraction in service of capitalist accumulation and colonial conquest.<sup>52</sup> Colonialists' decades-long pursuit of the elusive last crocodile was marked by layers of material and epistemic violence against Palestinian life and land. This violence surpassed the outcomes of individual colonialists' hunts.

Despite the competitiveness between European nation-states, colonial scientists of different national and religious affiliations cited and purchased specimens from

each other in their pursuit of Palestinian crocodiles. Amateur European naturalists and researchers who were trained in other disciplines also documented and collected Palestinian crocodiles. They published alongside one another about Palestinian crocodiles in the same journals and periodicals. I draw on colonial zoological literatures published between 1870 and 1935, focusing on publications by German (Catholic and Templer), British, and Zionist individuals because of their prominence in documenting, acquiring, and speculating about Palestinian crocodiles. I use “colonialist” and “colonial zoologist” as unifying terms, though when it is relevant, I distinguish between these groups. However, national or religious affiliation alone cannot serve as an organizing principle, and my overarching intention is to address the pervasive speculation about Palestinian crocodiles across colonial projects. In what follows, I demonstrate how colonialists’ pursuit of Palestinian crocodiles was propelled by colonialists’ enduring fascination with “lastness” as a spatial-temporal construct, Palestinian crocodiles’ market value as scarce commodities, place-based historical associations, and the value of crocodiles as racialized symbols of colonized terrain in European animal imaginaries.

### *Lastness*

Colonial zoologists’ fixation on the last Palestinian crocodile was in part driven by an enduring European fascination with “lastness” as a spatial-temporal construct. This fascination exemplifies the convergence of evolutionary science and imperial sensibilities that shaped colonial research on Palestinian life and land. During this period, evolutionary theory was “understood as *the* preeminent doctrine of empire” by both its “popularizers” and critics.<sup>53</sup> In colonial cultural production, it converged with the myth of the “last of the race” and an enduring fascination with the “rise and fall” of civilizations.<sup>54</sup> From a strictly Darwinian standpoint, rarity is associated with weakness rather than value.<sup>55</sup> Certainly, colonialists’ writings on Palestine reflect their confidence in their superiority and commitment to white European supremacy. Yet these sentiments, and their violent and exploitative activities, were often cloaked in an air of “imperialist nostalgia.”<sup>56</sup> A looming sense of extinction motivated colonial researchers’ efforts at capturing Palestine’s human and nonhuman inhabitants in words and images. As Beshara Doumani observes, their skewed, orientalist studies aimed at “documenting an unchanging society before its anticipated extinction due to contact with the West.”<sup>57</sup> They failed to see and address Palestinian society’s cultural, economic, and intellectual heterogeneity and dynamism.

### *Scarcity*

The scientific value of the last crocodile as rare empirical evidence was inextricable from its market value as a scarce commodity. Alongside taxonomy and habitat, colonial zoologists’ writings on last Palestinian crocodiles were interspersed with references to money: an inability to afford purchasing a last crocodile,<sup>58</sup> a willingness to pay “any price within reason,”<sup>59</sup> and a triumphant proclamation that “the promise of a reward produced” a specimen after a zoologist’s unsuccessful hunt.<sup>60</sup> These discursive performances of ownership and invocations of finances demonstrate how, following

Fred Moten and Stephano Harney, “speciation” serves as a prelude to “possession.”<sup>61</sup> Speciation, they argue, is a bilateral process. It is a violent act of domination over the earth and the colonized other that also makes, or speciates, the “self-owning, earth-owning” white European Man.<sup>62</sup>

Like extinction science, neither capitalist conceptions of property nor the commodification of animal byproducts were solely Europe’s domain during this period.<sup>63</sup> However, colonial zoologists frequently enacted the violent, totalizing divisions that Moten and Harney describe. The interlocking relationship between speciation and commodification often extended to humans; capitalist value relations figured as a near-taxonomic distinction between “us” and “them,” colonizer and colonized. Colonial zoologists recognized that ownership of rare, expensive crocodilian specimens would elevate their status among their European male peers. In turn, they dehumanized members of the indigenous population who they perceived – and “perceived” is a crucial word here – as interacting with nature outside the circuits of capital. Colonialists’ valuation and production of Palestinian crocodiles as rare commodities for the European marketplace depended upon the appropriation of Palestinian life and land as fungible, expendable resources.<sup>64</sup>

Colonial zoologists occasionally referenced conversations with unnamed Palestinian business contacts in Haifa and Nazareth; this suggests that they profited (however tangentially) from relationships (however fleeting) with members of Palestinian urban society’s middle and upper classes. Exploitative economic dynamics are most striking in colonial zoologists’ representations of the Ghawarna. Colonialists were quite forthcoming about their reliance upon the Ghawarna for labor, hunting prowess, and knowledge of marshlands ecology. Nonetheless, they never once mentioned paying or otherwise compensating members of the Ghawarna community. And despite colonial zoologists’ keen appreciation of the Palestinian crocodiles’ market value, there was no consideration of either the crocodiles or marshlands as the Ghawarna’s property – at least not in these terms.

The interlocking relationship between imperial science, capitalist exploitation, and racist dehumanization is apparent in an 1887 *PEQ* article by the Templer German-American researcher Gottlieb Schumacher. Schumacher did not merely represent the Ghawarna as existing outside the circuits of capital. To him, they *were* capital. Schumacher offered a lengthy, sensationalized account of his week-long unsuccessful hunt for an elusive last crocodile. He alleged that he depended heavily upon the Ghawarna throughout his excursion. Schumacher referred to them as “our *Ghawarneh*,”<sup>65</sup> thereby implying that the Ghawarna hunters were his property rather than autonomous human beings. Schumacher’s racist dehumanization of the Ghawarna was intensified through his appraisal of their “dark-skinned” physique to determine who was worth “taking” on his hunt.<sup>66</sup>

### *Place*

Palestinian crocodiles’ popularity among Europeans was heightened by place-based historical associations. The crocodiles were associated by name with several

archeological and geographic sites near their habitat which were connected to Hellenistic and medieval Crusader histories in Palestine. These sites included the ruins of the Greco-Roman port city Crocodilopolis and the nearby river Nahr al-Zarqa, which during the Greco-Roman period was allegedly known as Crocodeilon. The ruins and river attracted a broad spectrum of nineteenth- and twentieth-century Europeans, many of whom were apt to speculate about the significance of these active and lapsed place names. This speculation directed attention back to the area's live crocodile population, and so references to Palestinian crocodiles were ubiquitous in writing by European researchers and travelers who might not otherwise have cared about Palestinian wildlife. As evidenced by the dense citational web that often characterized colonial literature on Palestinian crocodiles, a steady stream of publications heightened Europeans' awareness of the crocodiles and subsequently increased the crocodiles' cultural capital.<sup>67</sup>

Through their excavation and representation of Palestinian crocodiles' place-based historical associations, colonialists perpetuated a Eurocentric interpretation of Palestine's material history.<sup>68</sup> The crocodile served as a reptilian conduit for rewriting – and claiming ownership over – Palestine's past, thereby de-Arabizing the history of the coastal marshlands.<sup>69</sup> The more scholarly, research-based colonial literatures often included uneven literary historiographies of references to local geography and the crocodiles; these jumped from Greco-Roman to medieval Crusader to nineteenth-century European-authored texts, omitting or glossing over periods in Palestine's history characterized by Arab rule.<sup>70</sup> They mostly neglected to cite literature on Palestinian crocodiles and crocodilian place-names that were authored by scholars from the region, such as that of Nasir Khusrau in the eleventh century or their contemporary, Mukhlis.<sup>71</sup> Instead, the Palestinian crocodile's origin story aligned with the grand origin story of so-called Western civilization, wherein Europe figured as the cultural and militaristic heir of Greece and Rome.<sup>72</sup> It was not only the crocodiles but also the colonists who donned the rhetorical mantle of lastness. Through the act of observing (if not successfully hunting) Palestinian crocodiles, nineteenth- and twentieth-century colonialists attempted to weave themselves into the noble legacy of conquerors past.

German Templers in particular had a pragmatic place-based advantage because of their colonies in the area, which preceded a substantive British or Zionist settler-colonial presence.<sup>73</sup> Although the British were enthusiastic about crocodile collection, historical records indicate that Germans were more successful at observing crocodiles in the wild and obtaining specimens.<sup>74</sup> On several occasions beginning in 1877, Templers from Haifa visited the Zarqa/Kabbara marshlands to renovate the flour mill and build other structures. Their documentation of crocodiles in *Die Warte des Tempels* was cited as evidence by colonial scholars beyond Templer circles.<sup>75</sup> German sites in Haifa were a hub for colonists who were interested in obtaining specimens. At the nexus of Templer-scientist relations in Haifa was Schumacher, whose writing on “those famous crocodiles” appeared across British and German venues.<sup>76</sup> Even among colonists, access to the last crocodile's habitat was dependent on political and economic strategy.

### *Reptilian Imaginaries*

Colonial zoologists' Palestinian crocodile-mania was fueled by an enduring European fascination with crocodiles. Long before the nineteenth century, crocodiles occupied a central place in European bestial imaginaries. Since crocodiles are not indigenous to the European continent, Europeans' knowledge of crocodiles drew upon a rich tapestry of Arab and African crocodile-related texts and traditions – itself a vast and varied subject that is beyond the scope of this article.<sup>77</sup> Shaped by layers of Egyptian, Roman, Gaelic, and Christian tropes, crocodiles were animated in lively if physiologically suspect ways in European visual arts, literary fiction, and rhetorical theory.<sup>78</sup> Crocodiles often figured as both the “ultimate beast of hypocritical evil” and an emblem of exotic terrain.<sup>79</sup> These reptilian imaginaries were occasionally bolstered by crocodilian remains transported from the African continent. Well before the modern era of natural history, crocodilian remains hung from the ceilings of European churches and apothecaries.<sup>80</sup>

Against the backdrop of these longer histories, crocodiles emerged with renewed force as a “key imperialist symbol” beginning in the late eighteenth century.<sup>81</sup> This infatuation was heightened by the iconic image of a chained crocodile that appeared on the “Napoleonic medal for the conquest of Upper Egypt.”<sup>82</sup> As Edward Said observed, this campaign played a significant role in catalyzing the “Oriental renaissance” that overtook Europe in the late eighteenth and nineteenth centuries.<sup>83</sup> Crocodilians became a convenient, generalized metonym for the “colonial other” and the dangers of colonized terrain “across imperial borders” because they inhabited Africa, India, and Asia.<sup>84</sup> The crocodile hunt emerged as an iconic imperial trope of European masculine dominance.<sup>85</sup> Unlike charismatic mammals like lions or cheetahs, which colonialists favorably associated with nobility and strength, crocodilians were viewed as untrustworthy creatures that needed to be overcome. By the time colonial interest in Palestinian crocodiles peaked at the turn of the twentieth century, crocodiles were a ubiquitous racialized symbol of colonized otherness.

This phenomenon does not fully account for Palestinian crocodiles' particularities in the eyes of European zoologists. Because of their scarcity and Holy Land habitat, Palestinian crocodiles were often viewed more favorably in comparison to crocodiles on the adjacent African continent, which colonial governments and hunters generally approached as pests to be exterminated rather than coveted collectables.<sup>86</sup> However, Europeans' enduring crocodile-mania undoubtedly contributed to colonialists' rather extreme fixation on a minor and localized Palestinian species. It helps to explain how, and why, Palestinian crocodiles were so readily available as a symbol of Palestine's “exotic” terrain and its militarized conquest.

This crocodile-mania is apparent in the Egyptian Expeditionary Force publication, the *Palestine News*. Inquiries about Palestinian crocodiles exceeded those about any other Palestinian animal species. The *Palestine News*' pages were populated with Palestinian crocodile-themed research briefs, poetry, letters to the editor, and adverts on behalf of self-identified zoologists who wished to purchase Palestinian crocodiles. The crocodiles' precise habitat and extinction status were irrelevant to some *Palestine*

*News* authors, the majority of whom had recently entered Palestine by way of Egypt. In a series of compositions that blended fact and fiction, they imaginatively willed wild crocodiles into existence across the Holy Land: One anonymous British military man alleged that he witnessed two crocodiles kill a camel on Ramallah Road<sup>87</sup>; another penned a poem that drew parallels between “Palestine crocodile tears” and the saltiness of the Dead Sea.<sup>88</sup> Coupled with the more overtly scientific and seemingly factual articles, this imaginative cultural production reflected and perpetuated British colonial fascination with Palestinian crocodiles.

## “Last Crocodile” in Times of Marsh Drainage



Figure 2. Photograph of the drainage process. “Measuring the stream.” Photographer Unknown. Undated, early 1920s. Archives, Kibbutz Maagan Michael.

Colonial zoologists’ half-century of speculation about the whereabouts of the last Palestinian crocodile and the extinction status of Palestinian crocodiles ended with the Zor al-Zarqa/Kabbara marshlands drainage project. In his 1935 volume *Animal Life in Palestine*, the Zionist zoologist Frederic Simon Bodenheimer specifically invoked the drainage as proof that Palestinian crocodiles were finally extinct.<sup>89</sup> Bodenheimer recognized that by destroying the crocodiles’ former habitat, marsh drainage made crocodile life in Palestine impossible.

The drainage project reflected shifting power dynamics in British Mandate Palestine. Initiated by the British Mandate and Palestine Jewish Colonization Association (PJCA) in the early 1920s,<sup>90</sup> it was fueled by a different configuration of “state, science, and capital” than the colonial zoological project.<sup>91</sup> Although it had implications for the natural sciences, marsh drainage was primarily executed under the scientific rubric of public health; malarial disease was a pressing issue at the time, and it was linked to the mosquitos that thrived in Palestine’s marshlands terrain.<sup>92</sup> Concerns about malarial disease and an investment in marsh drainage were shared by many members of Palestinian Arab society – a point that Bodenheimer’s contemporary Tawfiq Canaan argued in 1936.<sup>93</sup> However, the Zor al-Zarqa/Kabbara drainage project was also a vehicle for settler-colonial land appropriation. PJCA was eager to take over the so-called “waste land,” which was in close proximity to several existing Zionist settlements.<sup>94</sup> The Ghawarna’s efforts to defend their land in a protracted legal battle were unsuccessful.<sup>95</sup> Their labor was exploited during the drainage and they were resettled in the newly established city of Jisr al-Zarqa, which was created on a fraction of their former land.<sup>96</sup>

Bodenheimer’s extinction proclamation offers more than textual closure to a colonial scientific debate. Both because of Bodenheimer’s subject-position as a Zionist zoologist and the connection that he forms between Palestinian crocodile’s extinction status and the drainage project, Bodenheimer’s text reflects the continuation and evolution of the colonial zoological project in Palestine, which until this point was primarily executed by European Christians. In turn, it reflects the ongoing nature of the Palestinian crocodile’s extinction story. Palestinian crocodile extinction is not “just” an isolated species death perpetuated by past imperial powers. Its material and cultural afterlives are not only held in archival texts, taxidermized specimens, or in the historically inaccurate extinction narratives of Israeli cultural institutions such as the Biblical Zoo. The story of Palestinian crocodile extinction also continued on the ground through the environmental politics and policies of the Zionist settler-colonial project as it gained a stronghold over British Mandate Palestine.

A closer rhetorical analysis of Bodenheimer’s entry reveals these connections. Bodenheimer situates himself in scholarly conversation with the scores of colonial zoologists who previously speculated about the crocodiles’ extinction status and attempted to acquire specimens. He identifies several last Palestinian crocodiles and the German and British institutions where their remains are held.<sup>97</sup> Like colonial zoologists who previously wrote about Palestinian crocodiles, Bodenheimer relies on the Ghawarna’s knowledge of marshlands ecology; he notes that “Beduins, who inhabit the swamps, have repeatedly reported loss of human life and goats” to crocodiles.<sup>98</sup> But unlike colonial zoologists who were writing in the early 1920s, Bodenheimer does not end on an uncertain, speculative note. He establishes closure to the crocodile saga:

Since that time the whole swamp to the south of the Carmel has been properly drained and a flourishing settlement, Binyamina, now exists on their main breeding place. It is almost certain that the Nile Crocodile

is definitely gone and that it should be added to the list of the extinct species.<sup>99</sup>

The value-laden phrases “properly drained” and “flourishing settlement” suggest that Bodenheimer was a proponent of swamp drainage. In keeping with the scientific norms of the day, Bodenheimer does not indicate remorse about the destruction of an exceptionally biodiverse area. His complementary description of Binyamina demonstrates that his approval of the marsh drainage was driven by settler-colonial politics as much as public health concerns.<sup>100</sup>

Palestinian dispossession is, à la Said, a present absence in Bodenheimer’s account.<sup>101</sup> Bodenheimer does not name or address the drainage’s implications for the marshes’ Ghawarna inhabitants, despite the fact that their exploited labor and communal dispossession created space for Binyamina. This omission is striking because Bodenheimer previously invoked the Ghawarna’s dwelling-place and ecological knowledge in order to advance his scientific premise about the crocodiles. Bodenheimer’s selective invocation and erasure of the Ghawarna demonstrates the fungibility and disposability of Palestinians not only within colonial zoology (which among Zionists was catalyzed by the principle of *yidiyat haaretz*, “Knowing the Land”)<sup>102</sup> but within the broader settler-colonial Zionist enterprise.

This erasure is also apparent in Bodenheimer’s juxtaposing descriptions of the marshlands pre- and post-drainage. By describing the marshlands as the crocodiles’ “main breeding place” and the drained land as home to “a flourishing settlement,” Palestinian human presence is subsumed into crocodilian animal presence. Employing what Achille Mbembe calls the “grammar of animality,” Bodenheimer dehumanizes the Ghawarna and implicitly discredits their rights to and ownership of the marshlands.<sup>103</sup>

The events that Bodenheimer glosses over were monumental for the Ghawarna community. In our conversations about Jisr al-Zarqa’s interwoven environmental and human histories, local historians and community figures Sami al-Ali and Mohamad Hamdan shared their theory – cultivated through years of archival research and conversations with community elders – that their community’s Nakba dates to the 1924 drainage project.<sup>104</sup> The violent and disorienting transition to urban living, coupled with the near-total destruction and loss of their land, disrupted ways of life and livelihood that were intertwined with the marshland ecology.<sup>105</sup>

Al-Ali and Hamdan’s research combats three processes of isolation and separation. First, it challenges the community’s singular and (especially in the aftermath of 1948) often stigmatized status not only among Israelis but also among some Palestinians.<sup>106</sup> Jisr al-Zarqa is the last solely Palestinian city remaining on the Mediterranean coast within Israel’s 1948 borders; this is yet another rhetorical configuration of “lastness” that circulates around the community in the present.<sup>107</sup> Naming their community’s historic trauma as their Nakba is an act of communal empowerment; it is a means of inserting themselves into the broader narrative of Palestinian peoplehood.<sup>108</sup>

Second, al-Ali and Hamdan’s research foregrounds how ecological devastation – specifically habitat destruction and biodiversity loss – have detrimentally impacted

indigenous Palestinian ways of life. Their research, and the experiences of their community more broadly, lend critical valence and historical specificity to the term “environmental Nakba.”<sup>109</sup> The marsh drainage’s centrality to their community’s Nakba underscores how the Nakba’s human injustices were at times informed by coterminous settler-colonial environmental policies. Not only did the British Mandate and PCJA-led drainage project displace the Ghawarna from most of their ancestral wetlands, but the resulting ecocide also contributed to ongoing processes of economic marginalization and cultural erasure.<sup>110</sup>

By extension, al-Ali and Hamdan’s community-based research opens analytical pathways for recognizing – even mourning – the loss of nonhuman animal life in Palestine without valuing it over indigenous human life. As is now clear, late nineteenth- and early twentieth-century colonial zoologists’ outlook on Palestinian crocodile extinction was driven by an isolated preoccupation with the last living member of the species, and by extension, their ability to procure individual specimen to transport overseas. The extinction’s significance was tethered to a scientific-financial enterprise that demeaned and exploited the local Ghawarna community. By foregrounding the interconnectedness between human and nonhuman flourishing in their ancestral wetlands, al-Ali and Hamdan’s research paves the way for a relational approach to extinction that does not bifurcate Palestine’s nature from its human culture.<sup>111</sup> Instead of a myopic focus on a single species, a relational approach to extinction considers the interspecies ways of life that unravel as species go extinct.<sup>112</sup> Rather than fixating on the death of a singular specimen or the identity of a singular hunter, it addresses the intersecting circumstances that contribute to an extinction as it unfolds over time. And crucially, this approach foregrounds the experiences of those whose daily lives are most impacted and left most vulnerable in an extinction’s wake.

## **Conclusion: Afterlives**

Nearly a century has passed since Bodenheimer proclaimed the Palestinian crocodile’s extinction, obscuring the violent processes of Palestinian dispossession and ecological destruction. This dispossession has not ended.<sup>113</sup> Under the rubric of nature conservation, increasingly contemporary forms of extinction science have enabled the settler-colonial cooptation of Jisr al-Zarqa’s natural resources. And while there is no longer any doubt that the crocodiles are regionally extinct in the wild, their specters still loom over their former habitat where they at times animate Israeli environmental governance. The Zionist Names Committee renamed Nahr al-Zarqa as Nachal Tanninim, “Crocodile Stream,” an act of de-Arabization that hearkened back to the waterway’s Greco-Roman and Crusader monikers. Crocodilian imaginaries and settler-colonial state policy converged again at the turn of the twenty-first century. Israel displaced the people of Jisr al-Zarqa from more of their land when the Israel Nature and Parks Authority decided to rewild a segment of the former marshlands and establish the Shmurat HaTeva Nachal Tanninim, “Crocodile Stream Nature Reserve.”

A fence separates the nature reserve from the densely populated coastal city of Jisr al-Zarqa, whose growth has been curtailed by a number of discriminatory policies.<sup>114</sup> Although the reserve's establishment was presumably driven by a desire to conserve endangered species rather than eradicate them, it extends the violent legacy of colonial zoological activities in the area. Sami al-Ali and Mohamad Hamdan's place-based research is a powerful reminder of their community's steadfast, evolving presence throughout these decades of change and violence. Their work, together with the environmental justice initiatives of community leaders such as Saidah al-Ali, presents innovative tactics for commemorating past ways of life in Palestine's marshlands and imagining new ways forward.

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## Endnotes

- 1 Clarence's origin story is described on an adjacent plaque. I analyze it and the Biblical Zoo at greater length in my book manuscript in progress, "The Last Crocodile in Palestine: Envisioning Extinction in the Ruins of Empire."
- 2 "Chazon v' Matarot," *Gan HaChayot HaTanachi*, online at [biblical-zoo.webflow.io/heb/goals](http://biblical-zoo.webflow.io/heb/goals) (accessed 10 December 2019). See also, Irus Braverman, "Animal Frontiers: A Tale of Three Zoos in Israel/Palestine," *Cultural Critique* 85 (Fall 2013): 122–62.
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- 4 Wall plaque, Nile Crocodile Exhibit, Tisch Family Zoological Gardens, Jerusalem.
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- 6 In late nineteenth-century maps, Zor al-Zarqa and Kabbara are often marked as adjacent areas. However, "Zor al-Zarqa" and "Kabbara" (especially "Kabbara") were at times used to describe the entirety of the marshlands (Forman and Kedar, "Colonialism," 4). Unless I am citing others, I refer to the "Zor al-Zarqa/Kabbara marshlands," especially since the crocodiles would have moved through both areas.
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  - 10 Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge: Harvard University Press, 2011).
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  - 15 See, for example, Yehudit Ayalon, *Tanninim v’Nachal Tanninim* [Crocodiles and Crocodile River] (Jerusalem: HaYechida L’Yediat HaAretz v’Limudei HaSadeh, Misrad HaHinuch v’Tarbut, 1979), 3–4. I write about these stories in my book manuscript in progress, “The Last Crocodile in Palestine: Envisioning Extinction in the Ruins of Empire.”
  - 16 Raja Shehadeh, *Palestinian Walks: Forays into a Vanishing Landscape* (New York: Scribner, 2008); Mazin B. Qumsiyeh and Reena Saeed, “Orientalist Depictions of Jerusalem and Palestine versus Anthropological and Biological Diversity,” *Ya Quds! Academic Cultural Newsletter* 4 (July 2018): 12–15; Alessandro Petti, Sandi Hilal, Eyal Weizman, and Decolonizing Architecture Art Residency (DAAR), *Architecture after Revolution* (Berlin: Sternberg Press, 2013).
  - 17 Donna Jeanne Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008), 16; Petti, Hilal, Weizman, and DAAR, *Architecture*, 117.
  - 18 Alon Tal and David Katz, “Rehabilitating Israel’s Streams and Rivers,” *International Journal of River Basin Management* 10, no. 4 (2012): 318.
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  - 20 Signpost, “Spur-winged plover,” Nachal Tanninim Nature Reserve, Beit Hanania, Israel.
  - 21 E. Graf Von Mülinen, “Beiträge zur Kenntnis des Karmels,” *Zeitschrift des Deutschen Palästina-Vereins* 30, no. 3–4 (1907): 139.
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  - 24 Forman and Kedar, “Colonialism.”
  - 25 See also Sliman Khawalde and Dan Rabinowitz, “Race from the Bottom of the Tribe that Never Was: Segmentary Narratives amongst the Ghawarna of Galilee,” *Journal of Anthropological Research* 58, no. 2 (2002): 225–43.
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  - 27 Author interview with Hamdan, 5 January 2020; author interview with Saidah al-Ali, 2 January 2020.
  - 28 Author interview with Sami al-Ali.
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  - 31 Ilan Pappé, *The Ethnic Cleansing of Palestine* (Oxford: One World Publications, 2006), esp. 132–37.
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- 37 Rachel Poliquin, *The Breathless Zoo: Taxidermy and the Cultures of Longing* (State College, PA: Penn State University Press, 2012), 81, 87–96.
- 38 Alexander Schölch, *Palestine in Transformation, 1856–1882: Studies in Social, Economic, and Political Development* (Washington: Institute for Palestine Studies, 1993), 60.
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- 40 Poliquin, *Breathless Zoo*, 125.
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- 43 Haraway, *When Species Meet*, 4.
- 44 Olson, *Constitutive Visions*, 5.
- 45 I expound on the concept of scientific speculation in my 2021 doctoral dissertation, “Israel/Palestine: Speculative Ecologies” (University of Arizona).
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- 47 Colin Scott, “Science for the West, Myth for the Rest? The Case of James Bay Cree Knowledge Construction,” in *The Postcolonial Science and Technology Studies Reader*, ed. Sandra Harding (Durham: Duke University Press, 2011), 175–97. See also Marwa Elshakry, “When Science Became Western: Historiographical Reflections,” *Isis* 101, no. 1 (2010): 98–109. Notable historical accounts of animal science in the broader Middle East include Alan Mikhail, *The Animal in Ottoman Egypt* (Oxford: Oxford University Press, 2014); and Housni Alkhateeb Shehada, *Mamluks and Animals: Veterinary Medicine in Medieval Islam* (Leiden: Brill, 2012).
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- 52 Kathryn Yusoff, *A Billion Black Anthropocenes or None* (Minneapolis: University of Minnesota Press, 2018), 70–71.
- 53 Marwa Elshakry, *Reading Darwin in Arabic, 1860–1950* (Chicago: University of Chicago

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- 54 Fiona J. Stafford, *The Last of the Race: The Growth of a Myth from Milton to Darwin* (Oxford: Oxford University Press, 1994); Elshakry, *Reading Darwin*, 10.
- 55 Stafford, *Last of the Race*, 291.
- 56 Renato Rosaldo, "Imperialist Nostalgia," *Representations* 26 (1989): 107–22.
- 57 Beshara B. Doumani, "Rediscovering Ottoman Palestine: Writing Palestinians into History," *Journal of Palestine Studies* 21, no. 2 (1992): 9.
- 58 Ernst Schmitz, "Crocodiles in Israel," *Holy Land* (1921): 117–19, reprinted in Leshem, Goren, and Amit, *HaAv Ernest Schmitz*, 93–95.
- 59 "Advertisements," *Palestine News: The Weekly Newspaper of the Egyptian Expeditionary Force of the British Army in Occupied Enemy Territory* 1, no. 6 (11 April 1918); 10.
- 60 Tristram, *Flora*, 155.
- 61 Fred Moten and Stephano Harney, "Improvement and Preservation," in *Futures of Black Radicalism*, ed. Gaye Theresa Johnson and Alex Lubin (New York: Verso, 2017), 83–91.
- 62 Moten and Harney, "Improvement and Preservation," 83.
- 63 Doumani, *Rediscovering Palestine*; Seikaly, *Men of Capital*.
- 64 Yusoff, *A Billion Black Anthropocenes*, 70–71; Saidiya V. Hartman, *Scenes of Subjection: Terror, Slavery, and Self-making in Nineteenth-century America* (New York: Oxford University Press, 1997).
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- 67 Gray, "Crocodiles"; Schmitz, "Crocodiles."
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- 69 On de-Arabization, see Nur Masalha, *The Palestine Nakba: Decolonising History, Narrating the Subaltern, Reclaiming Memory* (London: Zed Books: 2012), 10.
- 70 Doumani, "Rediscovering Ottoman Palestine." *Journal of Palestine Studies* 21, no. 2 (1992): 5–28.
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- 72 Ella Shohat and Robert Stam, *Unthinking Eurocentrism: Multiculturalism and the Media* (London: Taylor and Francis, 2014), 55–58.
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- 74 Schmidt, "Crocodiles in Israel."
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- 77 Dan Wylie, *Crocodile* (Reaktion Books, 2013); Mikhail, *Animal in Ottoman Egypt*, 13.
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- 85 Leighton and Surrridge, "Empire Bites Back," 256.
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- 88 The Quare Fellow, "Lines to the Dead Sea," *Palestine News*, 1 August 1918, 4.
- 89 Frederic Simon Bodenheimer, *Animal Life in Palestine: An Introduction to the Problems of Animal Ecology and Zoogeography* (Jerusalem: L. Mayer, 1935), 197.
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- 92 Sufian, *Healing the Land*. See also: Chris Gratien, "The Ottoman Quagmire: Malaria, Swamps, and Settlement in the Late Ottoman Empire," *International Journal of Middle East Studies* 49 (2017): 583–604.
- 93 Tawfik Canaan, *Conflict in the Land of Peace* (Jerusalem: 1936), 87.
- 94 Forman and Kedar, "Colonialism," 6.
- 95 Forman and Kedar, "Colonialism."
- 96 Canaan, *Conflict*, 86–87. Until this point, Jisr al-Zarqa, which roughly translates to "Bridge over the Blue [Waters]," was the name of the bridge over Nahr al-Zarqa. Author interview with Sami al-Ali.
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- 98 Bodenheimer, *Animal Life*, 197.
- 99 Bodenheimer, *Animal Life*, 197.
- 100 Canaan, *Conflict*, 86.
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- 103 Achille Mbembe, *On the Postcolony* (Berkeley: University of California Press, 2001), 236.
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- 105 Author interview with Sami al-Ali.
- 106 Author interview with Sami al-Ali. The multifaceted nature of this stigma is beyond the scope of this article.
- 107 By "solely Palestinian," I mean a city that was not settled by Israelis. This distinguishes Jisr al-Zarqa from coastal cities that were ethnically cleansed, such as Caesarea, as well as "mixed" coastal cities such as Akko or Haifa.
- 108 Author interview with Sami al-Ali. For a pathbreaking work in this argumentative vein that focuses on Palestinian-Israeli cultural production, see Maha Nassar, *Brothers Apart: Palestinian Citizens of Israel and the Arab World* (Stanford, CA: Stanford University Press, 2017).
- 109 Mazin B. Qumsiyeh and Mohammed A. Abusarhan, "An Environmental Nakba: The Palestinian Environment under Israeli Colonization," *Science for the People* 23, no. 1 (2020); Abeer Al Butmah, Bobby Peek, and Eurig Scandrett, *Environmental Nakba: Environmental Justice and Violations of the Israeli Occupation of Palestine* (Friends of the Earth International, September 2013); Zayneb al-Shalalfeh, Fiona Napier, and Eurig Scandrett, "Water Nakba in Palestine: Sustainable Development Goal 6 versus Israeli Hydro-hegemony," *Local Environment* 23, no. 1 (2018): 117–24.
- 110 Masalha, *Palestine Nakba*, 10. I am grateful to Ahmad Amara for encouraging me to foreground the drainage's economic implications.
- 111 See also Penny Johnson, *Companions in Conflict: Animals in Occupied Palestine* (Melville House Printing: 2019), xvii.
- 112 Deborah Bird Rose, Thom van Dooren, and Matthew Chrulew, "Introduction," in *Extinction Studies: Stories of Time, Death and Generations*, ed. Deborah Bird Rose, Thom van Dooren, and Matthew Chrulew (New York: Columbia University Press, 2017), 4.
- 113 Rashid Khalidi, "From the Editor," *Journal of Palestinian Studies* 48, no. 1 (Autumn 2018): 5–6.
- 114 Author interview with Saidah al-Ali; "Israel: Discriminatory Land Policies Hem in Palestinians," *Human Rights Watch*, 12 May 2020, online at [www.hrw.org/news/2020/05/12/israel-discriminatory-land-policies-hem-palestinians](http://www.hrw.org/news/2020/05/12/israel-discriminatory-land-policies-hem-palestinians) (accessed 10 May 2021).