

Vanishing Nubia

Following Botanists in Egypt

Nancy Y. Reynolds

In 1826, Egyptologists discovered unusual palm fruits stored as offering gifts in ancient Egyptian tombs. The tree that produced them was depicted on tomb walls and had a specific hieroglyphic name—*mama en-xanini* (*mama-n-khanen*)—that distinguished it from the more common dom palm (known as *mama*) also recorded in ancient texts. Later explorations of ancient Egyptian sites dating across a three-thousand-year span continued to turn up these fruits mingled among preserved dates and dom nuts.¹ Nevertheless, questions remained in the nineteenth and twentieth centuries about the status of the tree species, eventually called *Medemia argun*, which many suspected had gone extinct. As an Egyptian botanist put it in the 1960s: “Although the palm was well known to the pharaonic people, it has not been known to exist in Modern Egypt.”²

In November 1963 a group of botanists based in Cairo set out across the Nubian desert to the “uninhabited” oasis of Dungul, located 220 kilometers southwest of Egypt’s frontier city of Aswan. One of the botanists, Vivi Täckholm, a Swedish botanist and Cairo professor who first came to Egypt in 1926, was nearing completion of a bilingual survey of Egypt’s vegetation, *Flora of Egypt/Nabatatu Misr*, that would be published in four volumes between 1941 and 1969. The other two botanists, Loutfy Boulous and Mahmoud Zahran, were younger scholars working at Egypt’s new Desert Institute in plant taxonomy and ecology.³ In his account of their 1963 trip, Boulous noted that the *Flora* authors “write about *Medemia* as a plant ‘to be looked out for,’ and . . . put an interrogation mark for its occurrence in Egypt.”⁴ Following a tip from the *ma’mur* (a district official), the group happened upon a single thriving tree, heavy with ripe fruit and surrounded by young seedlings, in Dungul. The botanists claimed their discovery recuperated the species into the ancient and continuous community of Egyptian vegetation as a remnant of the past and a promise of future fertility. As Boulous later claimed, the discovery proved that “*Medemia argun* is accordingly no longer an extinct species. It is a member of the modern Egyptian Flora, living as a relic in the Libyan desert of Egyptian Nubia. Its history from ancient days is still uninterrupted.”⁵

The 1963 trip came at a moment of upheaval and struggle in Nubia and in the professional field of botany in Egypt. Boulous, Täckholm, and Zahran also spent five days that month surveying the vegetation around three Nubian villages on the Nile near the border with Sudan.⁶ Boulous would preface and justify the report of that documentary study of the valley flora by lamenting the enormous cultural loss and temporal rupture entailed by the imminent destruction of Nubia: “The flora of that traditional area, adherent to every annual flood, accompanying a series of diverse civilizations during thousands of years, standing the ravages of time, the disturbance of man and nature, will soon be entirely inundated by the waters of the great artificial lake which will extend about 500 km south of the Aswan High Dam.”⁷ Botanical surveys in the desert in the 1950s and the 1960s were part of a larger state project to build an industrial and agrarian postcolonial future for Egyptians downstream in the Nile Valley by appropriating and destroying the lands of Nubia to the south of the new hydroelectric dam. Scholars swarmed over Nubia in the early 1960s, their salvage survey work (botanical, archaeological, geological, ethnological) extracting its knowledges and resources as state officials relegated the region to “the past” and offered it as the developing nation’s

“sacrifice zone.”⁸ The High Dam also deterritorialized the majority of the Nubian people, whose villages had been under encroaching threat since the British first erected a smaller dam at Aswan in 1902. The new reservoir flooded Nubia’s center and deepened its older political partition (between Egypt and Sudan) by causing the forcible resettlement of its northern inhabitants below the dam in Kom Ombo, Egypt, and most of its southern (Sudanese) inhabitants nearly eight hundred miles away in Atbara.

The regional death of Nubia in the summer and fall of 1964 coincided with the death of Mohammed Drar, one of Egypt’s preeminent botanists and coauthor of its comprehensive *Flora*. A Nubian himself, Drar first joined Täckholm as the local “collaborator” on the *Flora* project, although he would later come into full authorship, and his untimely death would suspend its completion. Drar’s linguistic skills and cultural knowledge positioned him as the one who matched Latin horticultural names with local vernaculars, translated plant histories out of the corpus of Arabic texts, and drew on his “life’s experience” to understand the local environment. He also filled in the project’s geographical voids, “tak[ing] upon himself the extremely difficult task of identifying all those localities of which a great number are not included in the official map and others incompletely indicated on the labels” of collected specimens.⁹ Drar’s death in December 1964 opens the narrative of important botanical texts in this period.

Although Drar’s *Flora* entry put the question mark on the *Medemia* palm’s existence in Egypt, his own description of its regional presence focused less on the tree as “nearly extinct” or a “relic” pointing to an Egyptian past. Rather, his speculative narrative emphasized the way the plant’s biogeography traced a unified Nubia that itself was vanishing under Egyptian internal colonialism. Text, survey, body, and tree emerged as material objects to “entwine landscape with absence,” as John Wylie puts it.¹⁰ But crucially, these were “deaths in the social and political margins,” which, Asli Zengin reminds us, are often not recognized as loss or erasure.¹¹ Michel-Rolph Trouillot’s insight that “silences crisscross or accumulate over time to produce a unique mixture” summons historians in such cases to move across convergent scales of story and archive.¹²

This article limns the overlaps of death and discovery in 1963–64 Egypt to excavate competing registers of landscape temporality in modes of engagement with and erasure of northern Nubia as state officials and scholars prepared it for vanishing. This reveals several

distinct but conjunctive modes of *following* that came together as botanists managed absence: affective practices of *following on* or coming after that acknowledged mentorship and laced through memorials to deceased colleagues; textual practices of *following by* that layered new information on older accounts (sightings, descriptions, observations, locations, and routes) in botanical histories; theoretical practices of *following in* that explained habitat and plant changes over time through ecological theories (evolution, disturbance, succession); and technical practices of *following to and through* that enabled close reading of landscapes, usually by professional methods of specimen identification and collection (traveling, walking, naming, surveying, recording). Botany’s peculiar temporal, textual, and spatial registers destabilized and amplified these modes of following, some of which marked other natural sciences, and the accumulations that cycled through them.¹³ The practices of botanists in Egypt to follow, transcribe, and fill in textual, personal, and physical landscapes disappearing in the 1960s ultimately facilitated Nubian displacement.

Following Extinction: Ecological Absence and Temporalities of Vanishing

In the early 1960s, botanists such as Boulos were among the many Egyptian and international scientists, artists, and social scientists preparing northern Nubia for its flooding by the new dam’s reservoir—and its final destruction as an ancestral homeland for one of Egypt’s most important ethnic groups.¹⁴ Encompassing a long, narrow swath of the Nile Valley from Aswan south to Dongola, historic Nubia had been the object of varying degrees of ongoing imperial and colonial encroachment by Egyptian and European state forces since ancient times. The region’s complex ethnic and geographic landscape allowed it to retain a measure of independence, although Egyptian and colonial rulers used it as a passageway in their quest to procure minerals and human labor for conscription or enslavement into Egyptian households, armies, and trading circuits.¹⁵ By the nineteenth century, Mehmet ‘Ali and his successors had intensified these extractions, although extension of Egyptian authority over the region was only partial and was interrupted in the 1880s and 1890s by Sudanese resistance under the Mahdi and by the British invasion and occupation of Egypt. The military violence used to “return” Sudan to Anglo-Egyptian control again rendered Nubia a corridor of destruction, and once the Mahdist state was defeated, allowed the Anglo-Egyptian

colonial state to build the first large dam at Aswan, Khazan Aswan, which opened in 1902. The reservoir behind this dam began the engineered flooding of Nubia. The low dam was raised in 1912 and 1933 to expand its irrigation capacity for downstream cultivation of export crops such as long-staple cotton, which peripheralized Egypt more tightly in the world economy. As a result, Nubia became flooded for part of the year all the way to the Sudanese border.¹⁶

In these years, Jennifer Derr notes, some Nubians displaced by the new lake “rebuil[t] their houses further up the steep granite hills that bordered the Nile south of Aswan, while others relocated. Those who remained . . . farmed their land when the waters of the reservoir were released. . . . As abbreviated agricultural cycles drastically limited productivity, a stream of Nubian men traveled north to search for work. In the first half of the twentieth century, Nubia became a land sustained by remittances.”¹⁷ Already severely disrupted by the 1930s, Egyptian Nubia appeared to downstream Egyptians as suitable for sacrifice when the new Nasserist state proposed the High Dam in the 1950s. According to Hussein M. Fahim, “While the impact of the first dam was relatively limited . . . the second [or High] dam’s effect was total, flooding all Nubian lands within the Egyptian territory and nearly one-third of the Sudanese Nubian Valley. All Egyptian Nubians and those Sudanese affected by the new lake (fifty thousand people on each side) had no alternative but to leave their homeland.”¹⁸ In the early 1960s, scholars pored over Nubia in campaigns to salvage knowledge about the region’s geology, ethnography and culture, and archaeology in addition to its botany.¹⁹ Many urban Egyptians had never been aware of Nubia before the High Dam, and these domestic surveys into the country’s “unknown” south frequently drew on the tools of colonial exploration. The region’s pending loss displaced the sacrifice on behalf of Egypt’s anti-colonial future onto Nubian bodies, property, land, and nonhuman kin, while also intertwining the “discovery” of the south’s arid landscapes with grief often expressed in the language of absence and extinction.

The midcentury Egyptian botanical search to locate a surviving individual tree to establish the living condition of *Medemia argun* drew on the language of extinction, in which, Audra Mitchell argues, “absence is the predominant phenomenological feature . . . and the register in which it is most often imagined and described.”²⁰ Extinction-as-absence, however, smooths over the uneven and varied temporalities of ecological

loss and obscures processes through which extinction temporalities change over time.²¹ In his ethnographic and philosophical account of bird extinctions, for instance, Thom van Dooren argues that “extinction is never a sharp, singular event—something that begins, rapidly takes place, and then is over and done with. Rather, the edge of extinction is more often a ‘dull’ one: a slow unraveling of intimately entangled ways of life that begins long before the death of the last individual and continues to ripple forward long afterward, drawing in living beings in a range of different ways.”²² Van Dooren critically examines the effects of conservation politics elicited by the spectacular event of the discovery, death, or captivity of the “last individual” of a species,²³ a type of framing Boulos used in his narrative about discovering the Dungul palm tree in 1963.

When Boulos declared the *Medemia* palm “no longer extinct . . . in modern Egypt,” he used the ecological language of extirpation, or “local extinction.” Geographers Ben Garlick and Kate Symons criticize the biological essentialism inhering in the concept of extirpation, “differentiated from extinction proper as being loss of species from a specified area,” because it “renders life fungible and exchangeable across its dynamic spatiotemporalities by arguing that a loss is only permanent (an extinction) if the species as a whole is eradicated across its geography in entirety. In such a narrative, place is a mere background, reduced to interchangeable habitat.”²⁴ The widespread death of trees from particular regions, caused by the spread of destructive fungi or insects, is a prime example of plant absence in the register of extirpation. Owain Jones, Kate Rigby, and Linda Williams ponder the effect of ash dieback, a tree disease projected to kill 98 percent of the ash trees in the United Kingdom in coming decades: “This is not extinction,” they write, “insofar as the ash, as a tree species, will survive in vastly reduced numbers, and over the centuries will probably recover with new strains resistant to fungal pathogen. But it is cultural and ecological devastation and diminution on a vast and tragic scale. It is biodiversity loss that sits alongside extinction.”²⁵ Framings of extinction, then, may also erase the specific histories of place, occluding the ways in which individual landscapes accrete distinct relationships among losses occurring with varied temporalities.

Did the Egyptian botanists consider their triumphalist account of the tree “overcoming” botanical extinction/extirpation to assert a deep, continuous presence for Egyptian history in the Nile Valley a form of justification, or compensation, or even as a moral to the

story of Nubian displacement happening concurrently in the same landscape? Egyptian botanical texts from this period in fact disclose a more complex struggle, one that requires inflecting Genese Sodikoff's call to attend to the specific *forms* that the relationship between the extinction of "organic beings . . . and cultural formations" might take—"Is it one of analogy, interdependence, or collateral effect?"²⁶—with more critical accounts of how colonial botany has been racialized in the language of "Indigeneity" and "productivity" to smuggle in what Dixia Ramírez-D'Oleo calls "forced or coerced relationality" in human/nonhuman relations: a relationality that privileges whiteness and positions "blackness as compost," "that which issues from death to yield life for something else."²⁷ Ecologies of vanishing, then, entwine disparate and unequal temporal and spatial relationships among species, to places, and between culture and politics; they unfold as processes rather than appearing definitively as absence, reverberating through landscapes that are material, historical, and natural. Botanical surveys in the sparse, arid fringes of Nubia, including those undertaken by Drar, in fact reveal alternatives to framing Nubia as a space for the preservation of an Egyptian past, as Boulos regarded it, by foregrounding other relationships with the landscape that acknowledged past violence and the limits and uneven distributions of human capacity to know it.

Following Drar

Botany developed through one of the "investigative modalities" Bernard Cohn identified as key to the consolidation of Euro-American colonial power: the "survey" that explorers and scientists used to systematically inspect, study, document, and render coherent the natural and social features of places.²⁸ Information gathered and classified through surveys was recast into various textual forms (maps, archives, encyclopedias, compendia, systematic guidebooks), stored in collecting institutions (botanic gardens, natural history museums), and projected as a modality of rule over areas where colonial civil authority was largely absent.²⁹ Botany particularly serves in historical scholarship as the science that enabled colonial accumulation and expansion, especially European (and British) colonialism in tropical areas in South America, South Asia, and Southeast Asia and peripheral incorporation of other regions into the world economy, including Egypt.³⁰ Despite the powerful insights these studies offer into the roles of plants, botany, and institutions in extending imperial networks and extractions, much of this literature remains

focused on the tropical travels of a few European men, enabled by voluminous correspondence among botanists, an archive preserved at colonial botanical gardens and their libraries.³¹

Affective punctuations—the joy of discovery, the anguish of grief, the discomfort of uncertainty, a disdain of difference—mark *following* in the otherwise dry, terse, and "objective" text of botanical surveys. Among scientific writings, botanical texts were particularly saturated with affect and mourning: "Flora could be a melancholy muse," according to David Arnold.³² In tropical colonial South Asia, botany was particularly charged by an "interconnectedness" with sentiment and "awareness of death," which Arnold attributes to the relatively prominent role of European women (and their Victorian culture of sentiment) in botany and gardening and to a link in India and Europe between flowers and emotion, all of which was exacerbated by the "nature of [European] botanists' often fatal engagement with India's deathscapes and its empire of affect" due to the hazards of tropical disease.³³ Such "untimely" deaths of botanists in the field bequeathed to other botanists the material and emotional work of sorting and publishing the collections of those who died. "Botanical texts, with their attendant eulogies and dedications, thus became scientific memorials to the dead."³⁴ Urgent rescue or salvage surveys in the face of landscape destruction also cast temporal finitude into relief, which, when inflected by extinction anxieties, as overlapped in the 1960s Nubia studies, intensified the affective dimensions of botany and spilled "mourning, melancholia, and nostalgia"³⁵ into its narration of both dead colleagues and surveyed plant species.

Botanical research in Egypt is laced with affective irruptions to mentors, especially to Muhammad Drar in this period. Botanists articulated a keen awareness of following on Drar and his expertise, coming after him in the work of documenting plant species, carrying forward his legacy, and specifically using the "wild" space of the desert to follow the native or endemic vegetation of Egypt. Boulos dedicated his 1966 article "Flora of the Nile Region in Egyptian Nubia" "to the memory of Mohammed Drar (1894–1964), Egyptian Botanist, whose works on the flora of Egypt and Sudan will remain among the most notable contributions to our knowledge about these parts of the world."³⁶ Drar's contributions to Egyptian botany were many, including the comprehensive documentary record of the plant life of Egypt, the four-volume *Flora of Egypt*, published between 1941 and 1969. Drar's own movement to full

authorship in that project came haltingly. Listed as just a “collaborator” with Vivi Täckholm and her husband, Gunnar, for the first volume in 1941, Drar became joint author by volume 2, published in 1950. “In this [second] volume of *Flora of Egypt*, the name of my late husband, Prof. Gunnar Täckholm, D.Sc. (University of Stockholm), is left out,” Vivi Täckholm explained in the preface. “He took part in the work on the first volume up to [his] death in 1933. . . . His name is put as joint-author on the first volume to honour his memory as the first professor and founder of the Botany Department at the Fouad I University. As everything in the present volume is entirely the work of myself and Mr. Drar, I think it is more fair to him and in accordance with facts to put only our two names as authors. The same will be the case in following volumes.”³⁷ Vivi Täckholm thus excluded Drar in volume 1 to mark the death of her husband, although Drar later followed into his role of coauthor.

The changing formal nature of British colonial presence in Egypt—informal colonial protectorate (1882–1914), formal protectorate (1914–22), semicolonial occupation (1923–56)—and lingering Ottoman capitulatory and extraterritorial privileges granted non-British Europeans forms of local and economic extractive power that existed uneasily with the state and at times were instrumentalized as anti-British forces.³⁸ The international faculty of the private Egyptian University (later named Fuad I and then Cairo University) participated in this complex public sphere of interwar Egypt.³⁹ British and Swedish botanists had long competed for control over the developing international scientific field of botany through formalizing systems of classification, bioprospecting territories outside Europe, and establishing herbaria to house their growing collections and research authority.⁴⁰ In this context, the Täckholms occupied an interstitial space as Swedish botanists working in the British-Egyptian semicolonial state. After training in the material and scientific legacy of Sweden’s robust botanical collections made famous by Carl Linnaeus in the eighteenth century, Vivi Täckholm came to Egypt in the 1920s, joined the faculty of Cairo University in 1946, and used Swedish patronage to establish its Botanical Institute.⁴¹

Drar himself unexpectedly died of pneumonia on December 25, 1964, just as the new reservoir began to flood the lands of Nubia. The fourth volume of the *Flora of Egypt* opened with an eight-page elegiac essay on Drar’s life, written by Vivi Täckholm. “Since the appearance of Vol. 3 of *Flora of Egypt*, this work has suffered a

great loss. One of its authors, Mohammed Drar, passed away . . . at the age of 70. It is a difficult situation for the continuation of the work as nobody possesses his immense knowledge and experience of Egyptian plants,” she lamented.⁴² Sequencing texts with deaths, Täckholm used the front matter of the *Flora* to record her grief, control the framing of botanical research in Egypt, and take up narrative space—documenting her husband’s pioneering institutional role, her sense of distance as a Swede from British colonialism in Egypt, and both her pride in Drar’s professional development through paternalistic networks and her regret at the colonialist inheritances that constrained him.

Täckholm noted that Drar was born in 1894 into a “family of Sudanese origin” and that his mother was Nubian. His father held “a modest position” in Cairo in the Horticultural Department of the Ministry of Agriculture.⁴³ Drar was paternalistically apprenticed into botany by the British colonial director of the Horticultural Department, who “‘discovered’ Drar and gave him his botanical education in a more efficient way than any university would ever have done. . . . He treated Drar like one of his sons and taught him all his vast experience” but also “made a mistake when he advised Drar not to take an academic degree. . . . Drar had to suffer throughout his life from the lack of an academic degree.”⁴⁴ Drar built and managed two different botanic gardens in Cairo and developed specializations in trees, including acacia, she noted. He directed the botanical section of the Egyptian Agricultural Museum, arranging “the Sudanese part of the Museum exhibitions,” and eventually headed the botanical section of the new Egyptian Desert Institute, where, she proclaimed, he performed “miracles” of collecting, conserving, and reclaiming the desert, including the following signal achievement:

[Drar created] a garden where he planted all sorts of wild desert plants, which he himself collected during numerous desert excursions. The ground around the building was pure sand, and Drar decided not to apply any manure or soil but try to only add water. It was an experiment, but he succeeded. The garden offered a splendid sight which the many visitors from abroad had occasion to admire when the Desert Institute was inaugurated in 1950 in connection with the 25th anniversary of Cairo University.⁴⁵

Täckholm traced the routes of Drar’s desert exploration back onto the closing volume of the *Flora*, listing his comprehensive travels throughout Egypt’s deserts—

work that took him to remote areas with “no roads to follow” and nearly cost him his life—and recalling his “desert-minded[ness]” and “love” of Egypt’s arid zones.⁴⁶

Drar’s European mentors’ positioning of him as a supporting character—a nonacademic “natural” botanist of desert ecologies—reflected both their ability to wield colonial institutional power and broader racialized views in Egyptian society of Sudanese and Nubians. Although since at least the nineteenth century important linguistic and regional differences distinguished Nubians from Sudanese in Egypt, urban Egyptians and Europeans often conflated them, Eve Trout Powell has noted, in “a single identity . . . of the Nubian, whose color, customs, and accent Egyptian writers sketched out in numerous essays, dialogues, and stories”⁴⁷ by using a derogatory epithet that implied “brutishness or idiocy” and was part of a grammar of racism that wove anti-Blackness with references to class. Nubians had for centuries migrated to work for wages in Egypt’s cities, and many upper-class households recruited them into servant positions formerly held by enslaved people after the abolition of slavery at the end of the nineteenth century. “Discourses that link contemporary Nubians with their former servant status, blackness, slavery, and Africanness, simultaneously include Nubians within the nation and locate them in a subordinate position,” according to Elizabeth A. Smith.⁴⁸ By the twentieth century, Egypt’s downstream cities had become “sites of intense racial hostility,” and Nubian land in the south was raced as well, “deemed a desert by colonial powers, thus deemed worthy of desertion, emptiness, and depeopling,” argues Nubian architectural scholar Menna Agha.⁴⁹ Racialized views of Nubianness thus operated in two key registers that structured Drar’s positioning in the *Flora* texts. One positing him as a “native collaborator” rather than an author emphasized servitude; another highlighted his association with linguistic difference and informal culture.⁵⁰ The botanical texts do not use derogatory terms to refer to Drar or Nubia, but the representation of his lack of academic training and different linguistic competence in their elegiac prefaces suggest these racialized assumptions about the Nubian subject branched under his professional relationships.

An array of material practices of landscape change, including plantations and dams, articulated “new forms of racialized being” and drained the human from Blackness, as race became doubled as “metaphysical and geophysical claim in historical geographies of colonialism,” Kathryn Yusoff has argued.⁵¹ Yusoff’s attention is trained on the geologic and on race as “a

means to operationalize extraction” from the earth; but, as she points out, coloniality racialized earth matter to facilitate a wide array of unequal distributions of accumulation, dispossession, and violence.⁵² Postcolonial botanical survey work, such as that undertaken in 1960s Nubia, rejected European political control but perpetuated certain racializations of the landscape, including “the complex and often unmarked ways that plants have been sorted out as ‘native’ or ‘nonnative’ . . . and the forms of power to which those practices have been linked.”⁵³

During a four-month trip to Sudan in 1938, Drar amassed a large specimen collection that remained unpublished. He bequeathed his notes and the 2,548 specimens from the journey to Täckholm. In consultation with Drar’s technical assistant Muhammad al-Mahdi, who was still living, Täckholm organized and published these materials posthumously under Drar’s name in 1970.⁵⁴ In yet another elegy to Drar, Täckholm noted in that book’s opening pages how her ties to Drar created the obligation to continue his scientific work and preserve his legacy for the future: “Before his death he had expressed to me his wish that I should help publishing his collection, and he left me all his diaries from the journey to make use of. That is why I feel it a duty to his memory to do my best to save his journey from being forgotten in future.”⁵⁵ Not cut dramatically short by tropical illness, Drar’s legacy nevertheless threads midcentury plant histories with the melancholic in ways consonant with botany as a discipline, although inflected by desert rather than tropical materialities and marked by the power structures and layered racializations of late European imperialism and Egyptian nationalism.

Following *Medemia*

The overlapping botanical discoveries and deaths of 1963–1964 center around *Medemia argun*, that elusive “relic” tree finally “located” alive on the edges of Nubia’s deserts.⁵⁶ Similar to the *Hyphaene* or dom palm, *Medemia* is a rare species of fan palm that can grow up to ten meters high and is dioecious, meaning its reproductive organs and flowers occur on male and female plants, thus requiring more than a single plant to create a viable seed. The tree differs from the more common date and dom palms by having an “unbranched trunk,” bright yellow palm-stalk stems (or petioles), and distinctive plumlike fruits that, botanists note, are “ellipsoid . . . with a shiny, thin, deep purple skin which comes off readily and is more fragile than the edible chestnut.

The thin flesh [is] stringy, dry, yellow, tasteless. [Its] stone . . . black-dotted outside . . . in cross section looking as a white mass penetrated by black needles.”⁵⁷ Well adapted to the hyperarid conditions of the Nubian desert in the eastern Sahara, the palm has “supple leaves,” an ability to tap into scarce and saline water sources, and a “dense mass of leaves” consolidated at the head of the singled-trunk tree that, scientists speculate, “probably serves to protect the inflorescences [flower clusters] from the dry, hot desert sun and winds.”⁵⁸ The *Medemia* palm located in Dungul was later found to sustain a wide array of human and nonhuman lives, as the species tends to grow in isolated groves, rather than singly or intermingled with other trees.⁵⁹ Boulos and Haitham Ibrahim, another botanist in Aswan, noted in 2011 in an article on the tree as part of a series on Egypt’s “endangered flora and fauna” that Bedouins preferred the palm’s elastic leaves for weaving baskets, rugs, and ropes and that they collected and ate its fruit.⁶⁰ On a visit to the Dungul grove in 2007, Ibrahim and William Baker noted that “gazelles and rodents feed on the fibrous fruit pulp” in the “carpets of fruits [that] lie baking in the sun below the female [trees].”⁶¹ During autumn migration season, the trees host “large numbers of birds and mammals” as well as insects.⁶² The tree’s ability to sustain life and anchor the “diversity and assemblages of the Nubian Desert Oases ecosystems in Egypt” have led to recommendations that it be used “as a flagship species, to provide protection for the wild life in the Nubian Desert Oases and in southern Egypt.”⁶³

Egypt and the desert both function in botanical studies as spaces of origin, reservoirs archiving the deep past of plants. A 1949 review of the development of geobotanical research in Egypt by T. M. Tadros noted that assumptions about the desert as a space of preservation and thus Indigeneity drew generations of botanists to Egypt:

The history of Geobotany in Egypt is actually the history of all botanical studies. Since these are based principally on a knowledge of the indigenous flora, its history starts with that of general plant studies in Egypt. . . . The native flora of the country is to be sought in the desert on both sides of the fertile and almost permanently cultivated Nile valley. Such an arid desert habitat with a scanty water supply . . . has created a plant environment which has long aroused the interest of systematists and ecologists.⁶⁴

In this view, desert aridity culled all nonnative plant life and thus preserved a pure, endemic flora and ecological

past. Such thinking was anchored in the theory that plant growth in the desert did not produce ecological following: desert winds and dry conditions dislodge organic material and prevent its decomposition and accretion into soil. In botanical terms, following (on the level of a system or community) is known as *succession*, the “gradual, sequential series of changes in the species composition of an ecological community following a disturbance.”⁶⁵ Theories of desert succession began to change in the 1960s. In a UNESCO study of arid zones published in 1966, Muhammad Kassas, an Egyptian botanist then at the University of Khartoum, described the specific nature of succession among plants in desert communities, correcting older assumptions that succession occurred only in humid environments, not arid regions. Kassas argued, “It is true that this autogenic type of vegetational succession is, apart from the building of phytogenic sand mounds, of little significance in the desert. Another type, allogenic succession, is one of the keys to understanding the desert vegetation. By allogenic succession is implied that successive waves of plant growth occupy an area due to gradual cumulative changes in habitat produced essentially by physical processes independent of plant growth. Desert vegetation manifests successional progressive and retrogressive changes.”⁶⁶

In other words, new plants do not grow from organic cycles of decaying plant life in the desert. Rather, nonbiological and usually external changes to the habitat—either gradual (warming or drying trends; winds) or catastrophic (flooding, drought, volcanoes, or earthquakes)—alter the species distribution of an area. Historian Diana Davis argues that Kassas ultimately framed the desert as a problem that could be fixed with the right technology, financing, and political will—a highly attractive solution to modernizing postcolonial states like Egypt that imagined futures through spectacular technologies, such as large hydroelectric dams, despite their necropolitical consequences.⁶⁷ Kassas’s new scientific theory of desert following, or succession, based on the view that rupture and destruction were generative processes necessary to sustain life in arid ecosystems, helped underwrite Egyptian national designs to violently destroy Nubian ancestral lands with the new dam in the 1960s, as well as supported botanists’ survivalist narrative about the *Medemia* palm in the disturbed arid landscapes of the south.

Although Drar and Täckholm’s second volume of the *Flora of Egypt*, published in 1950, contains a six-page entry on the “mysterious” *Medemia* palm, the prose flagged the tree as a species “of cultivated or foreign

origin.”⁶⁸ The entry includes a section on evidence for the common distribution of the tree in ancient Egypt but primarily focuses on its recent history and links to Nubia. The *Flora* entry reports parenthetically on a secondhand story that a tree with similar fruits but a different, Sudanese name had been found at Nakhila, a small oasis in Egypt’s Nubian Desert near Kurkur in the late nineteenth century.⁶⁹ Otherwise, the entry’s authors asserted that the tree was “growing outside the Egyptian boundary.”⁷⁰ Botanists had documented varieties of the tree growing in the modern era in the desert oases of Sudanese Nubia, the entry noted, along “an old road known since the most ancient times . . . [that] connected Upper Nubia with the part of the Nile Valley where the kingdom Meroë was situated. The Egyptians imported the palm from Upper Nubia and even succeeded to acclimatize it in Thebes [today, Luxor] during the 18th Dynasty . . . [but it] seems to have been rare in Thebes.”⁷¹ The language of these entries frames *Medemia* as a Nubian tree, one living outside of and independently from Egypt, that in fact marked lines of Nubian unity and connection (the old road to the capital of the Nubian kingdom of Kush). A geologist mining the resources of desert Nubia, who was “aware of the old [secondhand] story and was thus looking,” officially documented another living specimen of the tree at Nakhila oasis in the month of Drar’s death.⁷² Other discoveries of the tree in the southeastern Nubian desert in the same year went unrecorded by Boulos, perhaps because they challenged his narrative of the “lone relic.”⁷³

Photographs of Boulos’s “mother tree” continued to circulate in the transnational scientific literature, as later scholars periodically reported on its condition—and ultimately its death—and the status of the “family” of trees it spawned.⁷⁴ Ibrahim and Baker noted in 2009 that “the tall mother tree that had been so handsomely illustrated by Boulos (1968) was dead, its crown blown off and its trunk still standing to 10 meters. However, the juveniles that Boulos had reported were healthy and had grown to more than 3 meters with one reproductive female and four reproductive males. Moreover, 29 new juveniles of various sizes were found.”⁷⁵ Botanists’ depiction of the solitary dead trunk positions the tree as an ethical demand to elicit care and communicate precarity in ways consonant with what Yusoff calls “the lone subject, isolated, cut off” that has the “kind of faciality [that] delivers this demand on behalf of biodiversity.”⁷⁶ However, in the context of the forced displacement of Nubians to new settlements in the 1960s, the

isolated intergenerational grove successional growing in the disrupted landscapes of arid Nubia also gestures toward a more sinister celebration of growth after ruptural loss.

Following Pasts

Close reading of the landscape, usually by slow movement in following prior pathways or traces, is central to botanical practice. For instance, Drar’s daily itinerary during his Sudanese floristic survey in 1938 is listed in the book, and the dairies of botanists are often logs of their movements across place.⁷⁷ Walking and writing are integrally connected in surveyed landscapes, a practice that requires “close and speculative attention” to patterns that emerge as well as the categories through which these are perceived, a “constant tension between here and elsewhere, accompanied by close attention to the indeterminacy of what is going on in a particular encounter.”⁷⁸ Discordance between the effects of time on landscapes versus other organisms shapes the forms of life and loss botanists record. Erik Mueggler points out that “if a landscape is a social relation, it is archival in form. The movement of the earth in time is not evolutionary like that of most living beings: it is accretive. And ever since our ancestors began to write, texts have been among the accretions that have formed its body.”⁷⁹ Mueggler’s studies of botany in the lush Himalayas focus on walking as integral to botanical survey; he also examines aspects of that walking that constitute but are erased in textual accounts: energy expended, pain experienced, and knowledge extracted from local guides, for instance, in carrying and organizing the expedition’s tools, food supplies, and specimens, thereby rendering colonial explorers “free” to wander and roam.⁸⁰

In his meditation on walking as a mode or practice of consuming landscapes, Michel de Certeau points to instances when the past unexpectedly wells up from within visually stable spaces of the present, a temporal density formed through accreted absences recalled into place.⁸¹ Walking itself, he acknowledges, is ultimately a practice of managing chronic absence: “To walk is to lack a place. It is the indefinite process of being absent and in search of a proper.”⁸² If, through walking, a human body comes into being and “measures itself against the earth,” then this requires navigating “play between constraint and room to manoeuvre,” since constraints such as gravity, balance, and a need for equilibrium make walking a process of suspended or “controlled falling.”⁸³ While a common embodied practice of movement, walking-as-chronic-absence gave muscular rhythm and

corporeal meaning to the professional and cognitive work of searching a landscape for lost growth.

In the early 1960s, diverse groups of downstream Egyptians walked intimately through Nubia as the state refashioned it into a landscape of death. In addition to the numerous salvage teams, official and cultural missions streamed regularly to the south, many of which appeared prominently in the local news. Students and volunteers took trips to Aswan and Nubia as part of official celebration of the technological marvel of the dam's construction.⁸⁴ This reporting often represented Nubian loss as one linking corporeality to geologic and elemental materiality: soil, water, land. For instance, the first evacuation of Egyptian Nubians displaced by the new reservoir involved 501 families from Daboud, a village just south of Aswan, on October 18, 1963. Hussein Fahim, an anthropologist working closely with the displaced Nubians, recalled departing residents' material practices of grief—kissing the earth or pushing soil into pockets close to their bodies—for the vanishing land:

On the day they boarded the boats, the women rose at dawn to sadly and silently visit their dead, spraying the graves with water expressing compassion and sanctification Observers were touched by the shared grief at the moment of departure. Many Nubians kissed the land as they left their empty, vacated homes, while others filled their pockets or small bags with soil. After boarding the boat, the Nubians . . . sat in deep silence, staring at the disappearing village; some had tears in their eyes and others cried openly. One Nubian . . . said, "As we were sailing, I recalled Noah's ark."⁸⁵

Fahim's portrait of the raw and almost primitive communal grief over forced displacement thus also promised a future generativity: Nubian "natural" landscape attunement could become a seed bank for successive desert life, an ark that gestured toward the recuperative theory of the persistence and indeed vitality of desert life after catastrophe espoused by botanists such as Boulos and Kassas.⁸⁶

To apprehend the long tails of extinction events—"they . . . are difficult to locate, define, understand, or even imagine"⁸⁷—Adam Searle offers the Derridean *trace* as a method to mark the "affective force" of absence and "the ethical affordances they bring about."⁸⁸ Naming practices also trace the ethical choices of depicting Nubian pasts. Jeffrey Sacks notes that "the naming of place shares in a mournful register, to gesture to the inscription of loss on the body of the letter and the letter of language."⁸⁹ One of Drar's signature contributions

to the international literature on Egyptian plants was his documentation of Egyptian and Arabic names for plants otherwise only known by their Latin botanical names. "Linguistically Drar was very gifted," Täckholm explained. "He mastered perfectly the English language and could read also French, German, Italian and Latin beside his mother tongue Arabic and the Nubian dialect he had been taught by his mother."⁹⁰ Drar's restoration of local names to plants otherwise glossed by Latin botanical designations challenged what historians of science have described as European botany's emptying out of the historical specificity of plant histories through translation and naming practices. Projit Bihari Mukharji calls this process "retro-botanizing"; Londa Schiebinger identifies "the rise of Linnaean systematics . . . as a form of what some botanists have called 'linguistic imperialism,' a politics of naming that accompanied and promoted European global expansion and colonization," specifically because it embedded and privileged certain histories "celebrating the deeds of great European men" rather than the "biogeographical distribution or the cultural uses of plants."⁹¹

In the case of *Medemia*, Drar's name surfaces repeatedly in the entry in *Flora of Egypt* as the local vernacular voice. For instance, the entry provides the Arabic variants of the plant's name (*argun* but also *dalla*, both in Arabic script and in various styles of transliteration), with this final comment: "The first name (Argoun) should be 'Urgoun although by the botanists cited Argoun in accordance with the colloquial pronunciation. Also Dalla is the correct name (Drar)."⁹² The *Flora of Egypt* contains a series of indexes that link vernacular and Latin botanical names, and each plant entry contains what Drar later described as "full information on old and modern names; there we also mention who collected the names and in which region they are used."⁹³ The teaching version of the collection, known as *Students' Flora of Egypt*, includes an essay by Drar titled "Vernacular Names." There Drar recounts his own efforts to chart "the development of local names of plants during the last two centuries" by carrying and cross-checking in the field lists of vernacular names of plants compiled in the eighteenth century by European explorers.⁹⁴ He noted names that had been lost or are now applied to different plants, although he concluded, "It can be safely stated that a good deal of names recorded in earlier years still survive, particularly among plants of general or local use. The student should be aware that local names often differ from one region to another, not only in the Nile Valley but in the

desert as well. . . . As a rule the elder people of that country carry with them names of their fatherland.”⁹⁵

However, Drar strongly cautioned that collecting local names was complex and imperfect. “As a rule botanists should not expect their guides to know the vernacular names of every plant they see during their excursions. Those who persist on this point will, in the long run, compile a mixture of correct and incorrect names. All collecting of local names has to be done with great care.”⁹⁶ If following past botanical knowledge into the emerging postcolonial present involved collecting names that asserted biogeographical specificity against imperially inflected systematics, Drar also named the confines of those local knowledges, the limits of transcribing and translating lived landscapes into texts, the dangers to truth when informants are pressed to fill in gaps of knowledge. “The production of traces,” Trouillot notes, “is always also the creation of silences.”⁹⁷

Endurances and Ethics

Various narrative and affective modes of following tangled in the overlapping voids in the botanical and historical record in 1963–64: the tree that was absent as a past coming into view while Nubian presents—the land, Drar—moved into absence by becoming pasts. Performing layered modes of following, botanists helped prepare Nubia for this destruction. With his archival/textual question mark about the palm and his caution against forcing too much out of the landscape and those who inhabited it, Drar refused to fill in the landscape of Nubia being emptied by the Egyptian state as it built the irrigation futures of downstream communities. He also clearly retraced *Medemia argun*’s history across the “old desert roads” conjoining the region’s fragments in order to reconstruct its unity and point to the long history of ruination that made possible Nubia’s current present of destruction. Drar’s historical tracing differed from Boulos’s depiction of a lone but fecund “relic tree,” which gestured toward a dying past of Nubian lifeforms that, postrupture, could generate an Egyptian future.

The displacements and violence that in the mid-twentieth century reconfigured the Nubian desert—and the people, like Drar, who knew it by collecting its plants and its names—produced “sequential and synchronous relationships and inheritances” that ultimately left “unequal endurances and influences in the present, both markings of lost pasts and lost futures.”⁹⁸ Stories and struggles from Nubia’s entangled vanishings in the middle 1960s point to the work of long,

sedimented histories of colonialism in structuring over time the unfolding of absence in nonlinear narratives that must be accommodated, even foregrounded, in global configurations of environmental activism. In landscapes, accumulations of loss—of living beings and ways of knowing them—are structured by particular forms of materiality, relations of power, and modes of representation for ecological change over time (as rupture, as succession, as entanglement, as accretion) often naturalized in lexicons of absence and conflated in modes of following. Narrating together stories of three protagonists—a palm, a botanist, and a region of Nubia—and their emplacements in overlapping but distinct registers of absence reveals the centrality of competing landscape temporalities in struggles to naturalize the destruction of Egypt’s south.

The enormity of loss in 1960s Nubia echoed and at times was displaced in the dirges for botanical mentors such as Drar. Scholars of climate change and extinction have argued that mourning is a form of ethical engagement and political action; as van Dooren and Rose have put it, “mourning is a process of learning and transformation enabling accommodations to a changed reality. It is an individual psychological process, but at the same time a deeply relational phenomenon. . . . Thus while grief is individually experienced, mourning involves action and is often carried out collectively both by human groups and by other animals.”⁹⁹ Much like Brian Deyo’s call for “indwelling with tragedy” to create “ecological sensibilities and ethical orientations that are adequate to the demands of the Anthropocene,”¹⁰⁰ Ashlee Consolo Wilcox draws on Derrida and Butler to argue that mourning has the potential to be “a potent ethical and political force,” one that could “be a catalyst for action between, among, and across species” and could ultimately collectively and publicly restore “bodies that have been disproportionately derealized from ethical and political consideration in global discourse,” such as racially and ethnically minoritized groups and nonhuman bodies.¹⁰¹ Yusoff cautions, however, that this work necessitates careful reflection about the politics and practices of representation, of “understandings of presence and making present those that are dead or soon to be dead [that would] mark the possibilities of both mourning and relating.”¹⁰² Ramírez-D’Oleo goes further to suggest that interspecies opacity and antirelational modes of communication may provide necessary space for rage at the unequal distributions of landscape manipulation and dispossession.¹⁰³

In contrast to much environmental humanities scholarship, which flatly theorizes extinction and landscape destruction in a present tense with a collective first-person perspective (the “we-will-all-soon-be-extinct” crisis of the Anthropocene),¹⁰⁴ this article has foregrounded other forms of landscape temporality and tracked the work of these competing pasts across some of the racialized human and nonhuman bodies and ecologies of Nubia. If the colonial explorer-scientist encounters an individual tree and sees himself reflected back from nature—or, in the words of John Fowles, “We feel, or think we feel, nearest to a tree’s ‘essence’ (or that of its species) when it chances to stand like us, in isolation”¹⁰⁵—a landscape-becoming-absence can disrupt the deceptive solace of cross-species relationality. In his prose poem *In the Presence of Absence*, Palestinian poet Mahmoud Darwish plays with temporality to point to its unsettling by dispossession and exile: “You pause for a long time before an iris that sprang up alone, nowhere near a pot. Not because, like you, it is a stranger among flowers, but because it relies on itself in growing on its own.”¹⁰⁶ His pause, a brief interruption of speech and action, instead lengthens in time as the colonized landscape refuses to reflect back the self.

Nancy Y. Reynolds is associate professor of history and of Jewish, Islamic, and Middle Eastern studies at Washington University in St. Louis. Her research investigates the history of twentieth-century Egypt. Her first book, *A City Consumed: Urban Commerce, the Cairo Fire, and the Politics of Decolonization in Egypt* (2012), reconstructed the material and social lives of commodities, stores, and streets to narrate Egyptian efforts to unyoke the nation from its colonial past. She is currently completing a history of the Aswan High Dam. Her interest in arid lands ecology and botany developed during a recent Mellon New Directions Fellowship spent investigating heat tolerance and arid lands knowledge practices for the project “Heat: Recent Egyptian Histories.” ORCID: <https://orcid.org/0009-0003-7466-4125>.

Notes

I am deeply grateful to Anne-Marie McManus, Sophia Stamatopoulou-Robbins, Camille Cole, Vasiliki Touhouliotis, Önder Çelik, and other members of the Sawyer Symposium for their feedback on drafts of this article; Amr Kamal for pointing me back to Certeau on walking; Barbara N. Kunkel and Marjan Wardaki for discussions on botany; Dwyer Brown, Naomi Greyser, and Marcia Black for crucial support; Marwa Elshakry and an anonymous reviewer for helpful comments on an earlier version; the editors at *Comparative Studies in*

South Asia, Africa, and the Middle East for their tremendous care and efficiency in bringing this article to publication; the staffs of the Rare Books and Special Collections Library at the American University in Cairo, especially Stephen Urgola and Nada Yassen, and the Washington University Interlibrary Loan Program for help with research materials; and the American Council of Learned Societies Fellowship Program, the Mellon New Directions Fellowship Program, the Mellon Sawyer Seminar on the Comparative Study of Cultures, and Washington University in St. Louis for funding my research and writing.

1. Boulos, “Discovery,” 117.
2. Boulos, “Discovery,” 118.
3. Zahran and Gilbert, *Climate-Vegetation*. Published photographs of the expedition depict many unnamed assistants, a common practice in botanical journals (Mueggler, *Paper Road*). The photograph published in Boulos’s 1968 account features at least fifteen individuals posed by the tree (Boulos, “Discovery,” 118).
4. Boulos, “Discovery,” 118.
5. Boulos, “Discovery,” 120.
6. Boulos, “Flora,” 184.
7. Boulos, “Flora,” 184.
8. Winegar, *Creative Reckonings*, 177; Kuletz, *Tainted Desert*. Scholars have since expanded the concept of “sacrifice zone,” although remaining largely limited to North America. See also Gómez-Barris, *Extractive Zone*.
9. Täckholm, “Mohammed Drar,” 9.
10. Wylie, “Landscape, Absence,” 280.
11. Zengin, “Death and Afterlives,” 142.
12. Trouillot, *Silencing the Past*, 27.
13. Latour, *Science in Action*, 218.
14. The High Dam also destroyed botanical species knowledge among non-Nubian Bedouins; see Kandal et al., “Vanishing Knowledge.”
15. Fogel, *Mémoires du Nil*, 68–75; Troutt Powell, *Different Shade*, 48–53, 65–70.
16. Geiser, *Egyptian Nubian*, 32.
17. Derr, *Lived Nile*, 69.
18. Fahim, *Egyptian Nubians*, 30.
19. Carruthers, *Flooded Pasts*; Hopkins and Mehanna, *Nubian Encounters*; Reynolds, “Building the Past.”
20. Mitchell, “Beyond Biodiversity,” 31; see also Garlick and Symons, “Geographies of Extinction,” 312.
21. Mitchell, “Beyond Biodiversity,” 31.
22. Van Dooren, *Flight Ways*, 12.
23. Van Dooren, *Flight Ways*, 12–13. See also Yusoff, “Aesthetics of Loss,” 582, 583.
24. Garlick and Symons, “Geographies of Extinction,” 306.
25. Jones, Rigby, and Williams, “Everyday Ecocide,” 393.
26. Sodikoff, “Introduction,” 4.

27. Ramírez-D'Oleo, *Not Generative*, 8, 12.
28. Cohn, *Colonialism*, 7–8.
29. Mueggler, *Paper Road*, 45.
30. On the role of botany in European colonization of tropical regions, see Brockway, *Science and Colonial Expansion*; Schiebinger, *Plants and Empire*; McCracken, *Gardens of Empire*; Arnold, *Tropics*; Mueggler, *Paper Road*; Schiebinger and Swan, *Colonial Botany*. On the role of botany in peripheralization, see, e.g., Owen, *Cotton and the Egyptian Economy*; Inal, “Fruits of Empire”; Asceric-Todd et al., *Travellers in Ottoman Lands*. See Mikhail, *Nature and Empire*, 124–69, for an excellent discussion of trees and timber in early modern Egypt. Although agriculture has been a central focus of Egyptian historiography, historians of science and environment have not systematically studied the development of botany, especially desert vegetation, as a field of knowledge and practice in Egypt. Most studies of Middle Eastern and North African deserts center around developmentalist and settler colonial attempts to “regreen” them. See Davis, *Resurrecting the Granary of Rome*; Davis, *Arid Lands*; and Zerubavel, *Desert*.
31. On these archival collections, see Arnold, *Tropics*, 37–41.
32. Arnold, *Tropics*, 67.
33. Arnold, *Tropics*, 62.
34. Arnold, *Tropics*, 65.
35. Heise, *Imagining Extinction*, 12.
36. Boulos, “Flora,” 184.
37. Täckholm and Drar, *Flora*, ix.
38. See Reynolds, *A City Consumed*, on the use of French culture and language to oppose British colonialism.
39. See Ahmed, *Last Nahdawi*, although his focus is on the humanities rather than botany.
40. For instance, see Schiebinger and Swan, *Colonial Botany*.
41. Nordenstam, El-Ghazaly, and Kassas, *Plant Systematics*.
42. Täckholm, “Mohammed Drar,” 3.
43. Täckholm, “Mohammed Drar,” 3.
44. Täckholm, “Mohammed Drar,” 4.
45. Täckholm, “Mohammed Drar,” 6. At the opening of the Desert Institute, Drar, Täckholm, and Yusuf Milad welcomed King Faruq into the Botanical Museum on the institute’s second floor. The botanical section featured the collection of desert plants and especially crop specimens from “Egypt’s oases.” Faruq, known for his love of food, remarked on “a very good variety” of apples from Rafah in the museum exhibition. A town on the border of Palestine and Egypt, Rafah (as part of Gaza) had just come under Egyptian administration in 1948. Faruq’s verbal gesture to the apple suggests another instance of botany’s entanglement with sacrificed landscapes. The king toured, and the press also featured, the desert plant garden that surrounded the institute and was under Drar’s care. See “Al-Malik yafatih ma’had fu’ad al-awwal lil-sahra.”
46. Täckholm, “Mohammed Drar,” 7.
47. Troutt Powell, *Different Shade*, 70.
48. Smith, “Place, Class,” 401.
49. Agha, “Not a Desert,” 61, 68.
50. Colla, “Translator’s Afterword,” 202.
51. Yusoff, “The Inhumanities,” 670, 672.
52. Yusoff, *Billion Black Anthropocenes*, 33.
53. Mastnak, Elyachar, and Boellstorff, “Botanical Decolonization,” 363.
54. Drar, *Botanic Expedition*.
55. Drar, *Botanic Expedition*, 3.
56. Boulos describes the record of *Medemia* in Egypt as “mystical”; Boulos, “Discovery,” 119. Gibbons and Spanner use the term “mysterious”; Gibbons and Spanner, “Valleys of the Sudan,” 34. “Archived correspondence at the Royal Botanic Gardens, Kew indicates that *Medemia* was as mysterious and intriguing to botanists as it is now” (Ibrahim and Baker, “*Medemia argun*,” 12). See also Ibrahim, *Final Report*, 5–6, where he partly attributes the palm’s “mysterious history” to its ancient “spiritual or ritualistic significance.”
57. Täckholm and Drar, *Flora*, 296–97. In this entry, Drar explains that the term ‘*arjun*’ (meaning date palm branch with date cluster) was added to the genus name *Medemia* to differentiate it from the species in northern Sudan/Egypt that had larger fruits (*M. abiadensis*). Once determined to be the same species, *arjun* was retained for both. Boulos calls the two tree names “synonyms” (Boulos, “Discovery,” 120). According to Ibrahim and Baker (“*Medemia argun*,” 10), *arjun* was reportedly used by Bedouins of the Ababda and Bisharian tribes in the 1830s in Sudan’s Nubian Desert.
58. Ibrahim and Baker, “*Medemia argun*,” 10; Langlois, “*Medemia*,” 167.
59. Ibrahim and Baker, “*Medemia argun*,” 17; Sarant, “Endangered Species”; Ibrahim, *Final Report*, 6–7.
60. Boulos, “Discovery,” 120.
61. Ibrahim and Baker, “*Medemia argun*,” 17. On this trip, they also located the remains of a male *Medemia* tree “about 70 meters from the famous old female reported by Boulos.” This, they claimed, “resolved an outstanding mystery linked to the account of Boulos (1968) that was first raised by Langlois (1976). How could a lonely adult female have produced a cluster of juveniles?” Ibrahim and Baker, “*Medemia argun*,” 17. They also report little evidence of human use of the palms in 2007, although they did note that “vehicle tracks” were widespread around the grove and through the oasis, raising fears of fire damage.
62. Ibrahim, *Final Report*, 26–27.
63. Ibrahim, *Final Report*, 10, 46. For a similar local effort to conserve the tree in Sudan, see Ali, “The Argun Palm.”
64. Tadros, “Geobotany in Egypt,” 38. For another version of this origin story, see M. Kassas’s 1989 foreword to the first edition in Zahran and Willis, *Vegetation of Egypt*, ix. On Kassas and his later UN “anti-desertification” work, see Davis, *Arid Lands*, 158–59. Recent Egyptian botanical studies have focused less on the exceptionalism of Egypt’s desert flora for world history, instead acknowledging the rapid spread of “introduced” or “invasive” plant species and human impacts on deserts. See Abd El-Ghani, Salama, and Aleem, *Flora and Vegetation*, 6–8.
65. Sadava et al., *Life*, G-38.
66. Kassas, “Plant Life in Deserts,” 159–60. Kassas also served on the Faculty of Science of Cairo University and was affiliated with the Desert Institute in Cairo (Sarant, “Egypt Mourns”).
67. Davis, *Arid Lands*, 158–59; Mbembe and Sarr, *Politiques des Temps*.

68. Täckholm and Drar, *Flora*, 296, 2.
69. Täckholm and Drar, *Flora*, 297. The exclamation point “denotes plants seen by V. Täckholm” (2).
70. Täckholm and Drar, *Flora*, 297.
71. Täckholm and Drar, *Flora*, 30–31.
72. Boulos, “Discovery,” 119–20.
73. See Ibrahim and Baker, “*Medemia argun*,” 13.
74. Ibrahim and Baker, “*Medemia argun*,” 16–17. The dead mother tree is first described by Bornkamm et al. in 1998 (“Some Observations”). See also Ibrahim, *Final Report*, 8.
75. Ibrahim and Baker, “*Medemia argun*,” 14–15.
76. Yusoff, “Aesthetics of Loss,” 583, 582.
77. Drar, *Botanic Expedition*; Mathews, “Ghostly Forms,” G145–47; see also Canfield, *Field Notes*.
78. Mathews, “Ghostly Forms,” G153, G147.
79. Mueggler, *Paper Road*, 15.
80. Mueggler, “Lapponicum,” 455; see also 456, 446. Since the 1970s, Raja Shehadeh has deployed an older practice of walking (the *sarha*) to narrate the West Bank hills as a slow politics of laying claim to “vanishing landscapes” being lost to Palestinians by the incursions of Israeli settler colonialism (*Palestinian Walks*, 47).
81. de Certeau, *Practice of Everyday Life*, 108; see also Trouillot, *Silencing the Past*, 15.
82. de Certeau, *Practice of Everyday Life*, 103.
83. Solnit, *Wanderlust*, 31; Massumi, *Politics of Affect*, 12, 4.
84. Little, *High Dam at Aswan*, 102, 118; copy of article “La caravane pour le souvetage des vestiges de Nubie,” *Journal d’Egypte* 18 (1963), in CLT/CH/ARB 292, UNESCO Paris.
85. Fahim, *Egyptian Nubians*, 43.
86. Fahim and Geiser both frame their accounts of Nubian displacement as having positive benefits for the community once the trauma of relocation had been managed. On the salvation promise of arks in environmentalism, see, e.g., Cohen and Yates, *Noah’s Arkive*.
87. Searle, “Anabiosis,” 321.
88. Searle, “Absence,” 167.
89. Sacks, *Iterations*, 149.
90. Täckholm, “Mohammed Drar,” *Flora*, 7–8.
91. Mukharji, “Vishalyakarani as *Eupatorium ayapana*”; Schiebinger, *Plants and Empire*, 195, 198, 203.
92. Täckholm and Drar, *Flora*, 296.
93. Drar, “Vernacular,” 598.
94. Drar, “Vernacular,” 597.
95. Drar, “Vernacular,” 597–98.
96. Drar, “Vernacular,” 598.
97. Trouillot, *Silencing the Past*, 29.
98. Van Dooren “Spectral Crows,” 193; Searle, “Absence,” 168.
99. Van Dooren and Rose, “Keeping Faith,” 376.
100. Deyo, “Tragedy, Ecophobia,” 196, 197. Kate Rigby discusses lamentation as an ethical mode of “socio-ecological critique” (“Literature, Ethics,” 220).
101. Wilcox, “Climate Change,” 149, 150, 139.
102. Yusoff, “Aesthetics of Loss,” 578, 579.
103. Ramírez-D’Oleo, *Not Generative*, 30–33, 55.
104. Ramírez-D’Oleo, *Not Generative*, 5.
105. Fowles, *Tree*, 27. See also Yusoff: “Our relations with the non-human world are often raised on the singular not the plural, be it singular species or companionable subjects” (“Aesthetics of Loss,” 579).
106. Darwish, *Presence of Absence*, 82. On plants and trees as Zionist technologies of erasure in Palestine, see Bardenstein, “Trees, Forests.”

References

- Abd El-Ghani, Monier, Fawzy Salama, and Mohamed Abdel Aleem. *Flora and Vegetation of the Eastern Desert of Egypt*. Saarbrücken: LAP Lambert, 2014.
- Agha, Menna. “It Is Not a Desert Where Grandmother Sits.” In *Deserts Are Not Empty*, edited by Samia Henni, 50–71. New York: Columbia Books on Architecture and the City, 2022.
- Ahmed, Hussam R. *The Last Nahdawi: Taha Hussein and Institution Building in Egypt*. Stanford, CA: Stanford University Press, 2021.
- Ali, Osman M. M. “The Argun Palm, *Medemia argun*, in the Eastern Nubian Desert of Sudan.” *Palms* 60, no. 3 (2016): 145–53.
- Arnold, David. *The Tropics and the Traveling Gaze: India, Landscape, and Science, 1800–1856*. Seattle: University of Washington Press, 2006.
- Asceric-Todd, Ines, Sabina Knees, Janet Starkey, and Paul Starkey, eds. *Travellers in Ottoman Lands: The Botanical Legacy*. Oxford: ASTENE and Archaeopress Publishing, 2018.
- Bardenstein, Carol B. “Trees, Forests, and the Shaping of Palestinian and Israeli Collective Memory.” In *Acts of Memory*, edited by Mieke Bal, Jonathan Crewe, and Leo Spitzer, 148–68. Hanover, NH: University Press of New England for Dartmouth College, 1999.
- Bornkamm, Reinhard, Irina Springuel, Frank Darius, Mohamed Gabbr Sheded, and Magdi Radi. “Some Observations on the Plant Communities of the Dungul Oasis (Western Desert, Egypt).” *Acta Botanica Croatica* 59 (2000): 101–9.
- Boulos, Loutfy. “The Discovery of *Medemia Palm* in the Nubian Desert of Egypt.” *Botaniska Notiser* 121 (1968): 117–20.
- Boulos, Loutfy. “Flora of the Nile Region in Egyptian Nubia.” *Feddes Repertorium* 73, no. 3 (1966): 184–215.
- Brockway, Lucile H. *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens*. 1979; repr., New Haven, CT: Yale University Press, 2002.
- Canfield, Michael R., ed. *Field Notes on Science and Nature*. Cambridge, MA: Harvard University Press, 2011.
- Carruthers, William. *Flooded Pasts*. Ithaca, NY: Cornell University Press, 2022.
- Cohen, Jeffrey J., and Julian Yates. *Noah’s Arkive*. Minneapolis: University of Minnesota Press, 2023.
- Cohn, Bernard S. *Colonialism and Its Forms of Knowledge: The British in India*. Princeton, NJ: Princeton University Press, 1996.
- Colla, Elliott. “Translator’s Afterword.” In Idris Ali, *Poor*, 197–203. New York: AUC Press, 2007.
- Darwish, Mahmoud. *In the Presence of Absence*. Translated by Sinan Antoon. New York: Archipelago Books, 2011.

- Davis, Diana K. *The Arid Lands: History, Power, Knowledge*. Cambridge, MA: MIT Press, 2016.
- Davis, Diana K. *Resurrecting the Granary of Rome: Environmental History and French Colonial Expansion in North Africa*. Athens: Ohio University Press, 2007.
- de Certeau, Michel. *The Practice of Everyday Life*. Translated by Steven F. Rendall. Berkeley: University of California Press, 1984.
- Derr, Jennifer L. *The Lived Nile: Environment, Disease, and Material Colonial Economy in Egypt*. Stanford, CA: Stanford University Press, 2019.
- Deyo, Brian. "Tragedy, Ecophobia, and Animality in the Anthropocene." In *Affective Ecocriticism*, edited by Kyle Bladow and Jennifer Ladino, 195–212. Lincoln: University of Nebraska Press, 2018.
- Drar, Mohammed. *A Botanic Expedition to the Sudan in 1938. Edited after the Author's Death with Introductory Notes by Vivi Täckholm*. Cairo: Cairo University Herbarium, 1970.
- Drar, Mohammad. "Vernacular Names." In *Students' Flora of Egypt*, edited by Vivi Täckholm, 597–98. Cairo: Anglo-Egyptian Bookshop, 1956.
- Fahim, Hussein M. *Egyptian Nubians: Resettlement and Years of Coping*. Salt Lake City: University of Utah Press, 1983.
- Fogel, Frédérique. *Mémoires du Nil: Les Nubiens d'Égypte en migration*. Paris: Eds. Karthala, 1997.
- Fowles, John. *The Tree*. New York: Ecco/HarperCollins, 2010.
- Garlick, Ben, and Kate Symons. "Geographies of Extinction: Exploring the Spatiotemporal Relations of Species Death." *Environmental Humanities* 12, no. 1 (2020): 296–320.
- Geiser, Peter. *The Egyptian Nubian*. Cairo: AUC Press, 1986.
- Gibbons, Martin, and Tobias W. Spanner. "In the Valleys of the Sudan: Finding *Medemia*." *Palm Journal* 149 (1999): 33–35.
- Gómez-Barris, Macarena. *The Extractive Zone: Social Ecologies and Decolonial Perspectives*. Durham, NC: Duke University Press, 2017.
- Heise, Ursula K. *Imagining Extinction*. Chicago: University of Chicago Press, 2016.
- Hopkins, Nicholas S., and Sohair R. Mehanna, eds. *Nubian Encounters: The Story of the Nubian Ethnological Survey, 1961–1964*. New York: AUC Press, 2010.
- Ibrahim, Haitham. *Final Report: Conservation of Medemia argun and Nubian Desert Oases Biodiversity in Egypt, 2008–2010*. Cambridge: Conservation Leadership Programme, 2013. https://www.conservationleadershipprogramme.org/media/2014/12/080208_Egypt_FinalReport_Conservation-of-Medemia-argun_18thOctober2013.pdf.
- Ibrahim, Haitham, and William J. Baker. "Medemia argun—Past, Present, and Future." *Palms* 53, no. 1 (2009): 9–19.
- Inal, Onur. "Fruits of Empire." In *Seeds of Power: Explorations in Ottoman Environmental History*, edited by Onur Inal and Yavuz Köse, 81–110. Winwick: White Horse Press, 2019.
- Jones, Owain, Kate Rigby, and Linda Williams. "Everyday Ecocide, Toxic Dwelling, and the Inability to Mourn." *Environmental Humanities* 12, no. 1 (2020): 388–405.
- Kandal, Hanaa A., Hoda A. Yacoub, Menno P. Gerkema, and Jac. A. A. Swart. "Vanishing Knowledge of Plant Species in the Wadi Allaqi Desert Area of Egypt." *Human Ecology* 44 (2016): 493–504. <https://doi.org/10.1007/s10745-016-9826-9>.
- Kassas, M. "Foreword: First Edition." In M. A. Zahran and A. J. Willis, *The Vegetation of Egypt*, ix–x. 2nd ed. New York: Springer, 2009.
- Kassas, M. "Plant Life in Deserts." In *Arid Lands: A Geographical Appraisal*, edited by E. S. Hills, 145–80. Paris: UNESCO, 1966.
- Kuletz, Valerie L. *The Tainted Desert: Environmental and Social Ruin in the American West*. New York: Routledge, 1998.
- Langlois, Arthur C. "Medemia." In *Supplement to Palms of the World*, 165–69. 1976; repr., Stuart, FL: Horticultural Books, 1980.
- Latour, Bruno. *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge, MA: Harvard University Press, 1987.
- Little, Tom. *High Dam at Aswan*. New York: John Day, 1965.
- "Al-Malik yafatihu ma'had fu'ad al-awwal lil-sahra." *al-Ahram*, December 31, 1950, 3.
- Massumi, Brian. *Politics of Affect*. Cambridge: Polity Press, 2015.
- Mastnak, Tomaz, Julia Elyachar, and Tom Boellstorff. "Botanical Decolonization: Rethinking Native Plants." *Environment and Planning D: Society and Space* 32, no. 2 (2014): 363–80.
- Mathews, Andrew S. "Ghostly Forms and Forest Histories." In *Arts of Living on a Damaged Planet: Ghosts*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, G145–56. Minneapolis: University of Minnesota Press, 2017.
- Mbembe, Achille, and Felwine Sarr, eds. *Politique des Temps: Imaginer les devenirs africains*. Dakar: Jimsaan, 2019.
- McCracken, Donal P. *Gardens of Empire: Botanical Institutions of the Victorian British Empire*. London: Leicester University Press, 1997.
- Mikhail, Alan. *Nature and Empire in Ottoman Egypt*. Cambridge: Cambridge University Press, 2011.
- Mitchell, Audra. "Beyond Biodiversity and Species: Problematizing Extinction." *Theory, Culture and Society* 33, no. 5 (2016): 23–42.
- Mueggler, Eric. "The Lapponicum Sea: Matter, Sense, and Affect in the Botanical Exploration of Southwest China and Tibet." *Comparative Studies in Society and History* 47, no. 3 (2005): 442–79.
- Mueggler, Eric. *The Paper Road: Archive and Experience in the Botanical Exploration of West China and Tibet*. Berkeley: University of California Press, 2011.
- Mukharji, Projit Bihari. "Vishalyakarani as *Eupatorium ayapana*: Retro-botanizing, Embedded Traditions, and Multiple Historicities of Plants in Colonial Bengal, 1890–1940." *Journal of Asian Studies* 73, no. 1 (2014): 65–87.
- Nordenstam, B., G. El-Ghazaly, and M. Kassas, eds. *Plant Systematics for the 21st Century*. London: Portland Press, 2000.
- Owen, E. R. J. *Cotton and the Egyptian Economy, 1820–1914*. London: Oxford University Press, 1969.
- Ramírez-D'Oleo, Dixa. *This Will Not Be Generative*. Cambridge: Cambridge University Press, 2023.
- Reynolds, Nancy Y. "Building the Past: Rockscapes and the Aswan High Dam in Egypt." In *Water on Sand: Environmental Histories of the Middle East and North Africa*, edited by Alan Mikhail, 181–205. New York: Oxford University Press, 2013.
- Reynolds, Nancy Y. *A City Consumed: Urban Commerce, the Cairo Fire, and the Politics of Decolonization in Egypt*. Stanford, CA: Stanford University Press, 2012.
- Rigby, Kate. "Literature, Ethics, and Bushfire in Australia." In *Humanities for the Environment*, edited by Joni Adamson and Michael Davis, 210–24. New York: Routledge, 2017.
- Sacks, Jeffrey. *Iterations of Loss*. New York: Fordham University Press, 2015.
- Sadava, David, David Hillis, Craig Hiller, and May Berenbaum. *Life: The Science of Biology*. 10th ed. New York: W. H. Freeman, 2011.
- Sarant, Louise. "Egypt Mourns Mohamed Kassas, the Country's Pioneering Environmentalist." *Egypt Independent*, March 21, 2012. <https://www.egyptindependent.com/egypt-mourns-mohamed-kassas-countrys-pioneer-environmentalist/>.
- Sarant, Louis. "Endangered Species: The Argun Palm." *Egypt Independent*, February 15, 2011. <https://egyptindependent.com/endangered-species-argun-palm/>.
- Schiebinger, Londa. *Plants and Empire: Colonial Bioprospecting in the Atlantic World*. Cambridge, MA: Harvard University Press, 2004.

- Schiebinger, Londa, and Claudia Swan, eds. *Colonial Botany*. Philadelphia: University of Pennsylvania Press, 2005.
- Searle, Adam. "Absence." *Environmental Humanities* 12, no. 1 (2020): 167–72.
- Searle, Adam. "Anabiosis and the Liminal Geographies of De/extinction." *Environmental Humanities* 12, no. 1 (2020): 321–45.
- Shehadeh, Raja. *Palestinian Walks: Notes on a Vanishing Landscape*. London: Profile Books, 2008.
- Smith, Elizabeth A. "Place, Class, and Race in the Barabra Café: Nubians in Egyptian Media." In *Cairo Cosmopolitan*, edited by Diane Singerman and Paul Amar, 399–413. New York: American University in Cairo Press, 2006.
- Sodikoff, Genese Marie. "Introduction." In *The Anthropology of Extinction*, edited by Genese Marie Sodikoff, 1–16. Bloomington: Indiana University Press, 2012.
- Solnit, Rebecca. *Wanderlust: A History of Walking*. New York: Penguin Books, 2000.
- Täckholm, Vivi. "Mohammed Drar: In Memoriam." In *Flora of Egypt*, vol. 4, 3–10. 1969; repr., Dehra Dun: Bishen Singh Mahendra Pal Singh, 2010.
- Täckholm, Vivi, and Mohammed Drar. *Flora of Egypt/Nabatatu Misr*, vol 2. 1941; repr., Dehra Dun: Bishen Singh Mahendra Pal Singh, 2011.
- Tadros, T. M. "Geobotany in Egypt." *Vegetatio* 2, no. 1 (1949): 38–42.
- Trouillot, Michel-Rolph. *Silencing the Past*. Boston: Beacon Press, 1995.
- Troutt Powell, Eve M. A *Different Shade of Colonialism: Egypt, Great Britain, and the Mastery of the Sudan*. Berkeley: University of California Press, 2003.
- Van Dooren, Thom. *Flight Ways*. New York: Columbia University Press, 2014.
- Van Dooren, Thom. "Spectral Crows in Hawai'i." In *Extinction Studies*, edited by Deborah Bird Rose, Thom van Dooren, and Matthew Chrulew, 187–215. New York: Columbia University Press, 2017.
- Van Dooren, Thom, and Deborah Bird Rose, "Keeping Faith with the Dead: Mourning and De-extinction." *Australian Zoologist* 38, no. 3 (2017): 375–78.
- Wilcox, Ashlee Cunsolo. "Climate Change as the Work of Mourning." *Ethics and the Environment* 17, no. 2 (2012): 137–64.
- Winegar, Jessica. *Creative Reckonings*. Stanford, CA: Stanford University Press, 2006.
- Wylie, John. "Landscape, Absence, and the Geographies of Love." *Transactions of the Institute of British Geographers* 34, no. 3 (2009): 275–89.
- Yusoff, Kathryn. "Aesthetics of Loss." *Transactions of the Institute of British Geographers* 37, no. 4 (2012): 578–92.
- Yusoff, Kathryn. *A Billion Black Anthropocenes or None*. Minneapolis: University of Minnesota Press, 2018.
- Yusoff, Kathryn. "The Inhumanities." *Annals of the Association of Geographers* 111, no. 3 (2021): 663–76.
- Zahran, M. A., and F. Gilbert. *Climate-Vegetation: Afro-Asian Mediterranean and Red Sea Coastal Lands*. New York: Springer, 2010.
- Zengin, Asli. "Death and Afterlives in the Middle East." *Comparative Studies of South Asia, Africa and the Middle East* 42, no. 1 (2022): 141–45.
- Zerubavel, Yael. *Desert in the Promised Land*. Stanford, CA: Stanford University Press, 2019.