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Nancy Um, "Reflections on the Red Sea Style: Beyond the Surface of Coastal Architecture," Northeast African Studies 12:1 (2012): 243-271.

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Reflections on the Red Sea Style: Beyond the Surface of Coastal Architecture

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ABSTRACT

In 1953, a British architect named Derek H. Matthews introduced the idea of "The Red Sea Style" in print, in a modest article with that title. Although brief and focused on a single site, this article proposed that the architecture around the rim of the Red Sea could be conceived of as a coherent and unified building category. Since then, those who have written about Red Sea port cities have generally accepted Matthews's suggestion of a shared architectural culture. Indeed, the houses of the region's major ports, such as Suakin in modern-day Sudan, Massawa in Eritrea, Jidda and Yanbuᶜ al-Baḥr in Saudi Arabia, and Mocha, al-Ḥudayda, and al-Luḥayya in Yemen, share a number of visual similarities that support this cross-regional designation. Although many are in ruins, these coastal buildings appear to have more in common with each other than with their inland counterparts in their locality. The present article delves into the perceived coherence of Red Sea architecture, but it moves beyond the obvious common dimensions of material and decoration to turn attention to the transhistorical aspects of these port cities, along with their specificities and implicit differences. As a nonmonumental building tradition that emerged at the southern edge of the Ottoman world in the sixteenth

Northeast African Studies, Vol. 12, No. 1, 2012, pp. 243–272. ISSN 0740-9133.
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century and continued into the twentieth, the Red Sea style represents a tangible case of sustained cross-cultural contact across a linked maritime region and thus moves beyond the conventional modern limits of continent and nation.

Traveling by ship, eighteenth- and nineteenth-century voyagers noted the sparse nature of the settlements around the Red Sea rim, which was largely populated by modest villages crafted of reed and mud.[1] Occasionally, a city would appear on the coastal horizon, rising high up above the water with the white surfaces of its buildings shining under the bright light of the sun. These whitewashed cities built of coral rock, stone, and/or brick stood out starkly from their low-lying and more ephemeral surroundings. They included, but are not limited to, Suakin (Sawākin) in modern-day Sudan, Massawa (Maṣṣawa^{c}) in Eritrea, Jidda and Yanbu^{c} al-Baḥr in Saudi Arabia, and Mocha (al-Mukhā), al-Ḥudayda, and al-Luḥayya in Yemen.[2] (See Figure 1.)

In 1953, a British architect named Derek H. Matthews confirmed this perception of a shared architectural culture, by coining the unifying label, "The Red Sea Style."[3] Since then, observers have generally accepted this term and used it to refer to the collective language of building found in these various sites. This marker has never been contested or challenged, but at the same time, it has never been explored in any thoroughgoing or critical manner. Perhaps this was because Matthews set only modest defining parameters around the grouping, with the proposal that a shared set of building materials, as well as a generally similar visual aspect, tied the Red Sea buildings together. But he went no further in discussing what constituted the stylistic category that he had just created through the act of naming.

Indeed, Matthews's observations about the visual consistency of Red Sea houses may be obvious even to the untrained onlooker. Most Red Sea houses present multistory elevations with elaborately defined facades that feature a fairly consistent repertoire of carved wood and plasterwork. In the eyes of the premodern traveler, who moved from one port to another during an age when sea travel entailed considerable uncertainty and risk, such features would have presented an image of relative structural and decorative uniformity, and perhaps cultural continuity, with regard to the abovementioned ports.

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Figure 1. Map, The Red Sea. Drafted by Barry Levely.

However, modern architectural historians possess the ability to transcend a superficial reading of the visual character of the Red Sea buildings. While Matthews was not wrong in proposing the cross-cultural grouping, he stopped short of delving into the complexity of Red Sea architectural culture beyond the apparent dimensions of coral, wood, and plaster. In this article, I will move past a purely formal reading of Red Sea architecture

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in order to investigate its logic of unity. As such, I will question its shared history, its use of local and foreign building materials, the internal spatial organization of its key specimens, the dimensions of functional use, and the state of preservation of its buildings. Moreover, I will shift the vectors of attention to the transhistorical aspects of the Red Sea port cities, in order to represent the continuing life of this tradition into the present moment.[4] By highlighting the specificities of individual ports, we can view the Red Sea Style as characterized not only by its shared features but also by its complexity and implicit differences.

History, Origins, and Dissemination

Unfortunately, the Red Sea style is unwieldy as a topic of study for many reasons. First, the various textual and visual primary sources that inform us about these structures are limited. Moreover, modern architectural surveys and documentary studies are implicitly uneven in their distribution. For instance, the port of Suakin has been recognized as a key architectural site with numerous studies treating its built form.[5] By contrast, other ports, such as Yanbuᶜ al-Baḥr in Saudi Arabia and Massawa in Eritrea, have hardly been considered by recent observers.[6] This unevenness in coverage makes it difficult to study the Red Sea style in any balanced manner.

Moreover, today, most of the port cities in question have been destroyed or unevenly modernized. With so many past specimens ruined or built over and a marked dearth of foundational documents, it is difficult to produce a dependable chronology for Red Sea houses. All such attempts have suffered from reliance upon selective stylistic evidence, sparse dated material, or speculative comparative data.[7] In fact, most extant Red Sea examples are relatively recent, dating to the late nineteenth or early twentieth century, such as the restored Bayt al-Naṣīf, the key icon of Old Jidda, built from 1872 to 1881.[8] (See Figure 2.) Al-Ḥudayda's extant houses were built primarily during the second Ottoman occupation of Yemen, which began in 1849 when the Turks abandoned their previous stronghold, Mocha, for this new northern maritime base. According to historian Jonathan Miran, the city of Massawa experienced a "building boom" beginning in 1865 under Egyptian rule and continuing under the Italians, but no extant trace of architecture predates this rise in construction

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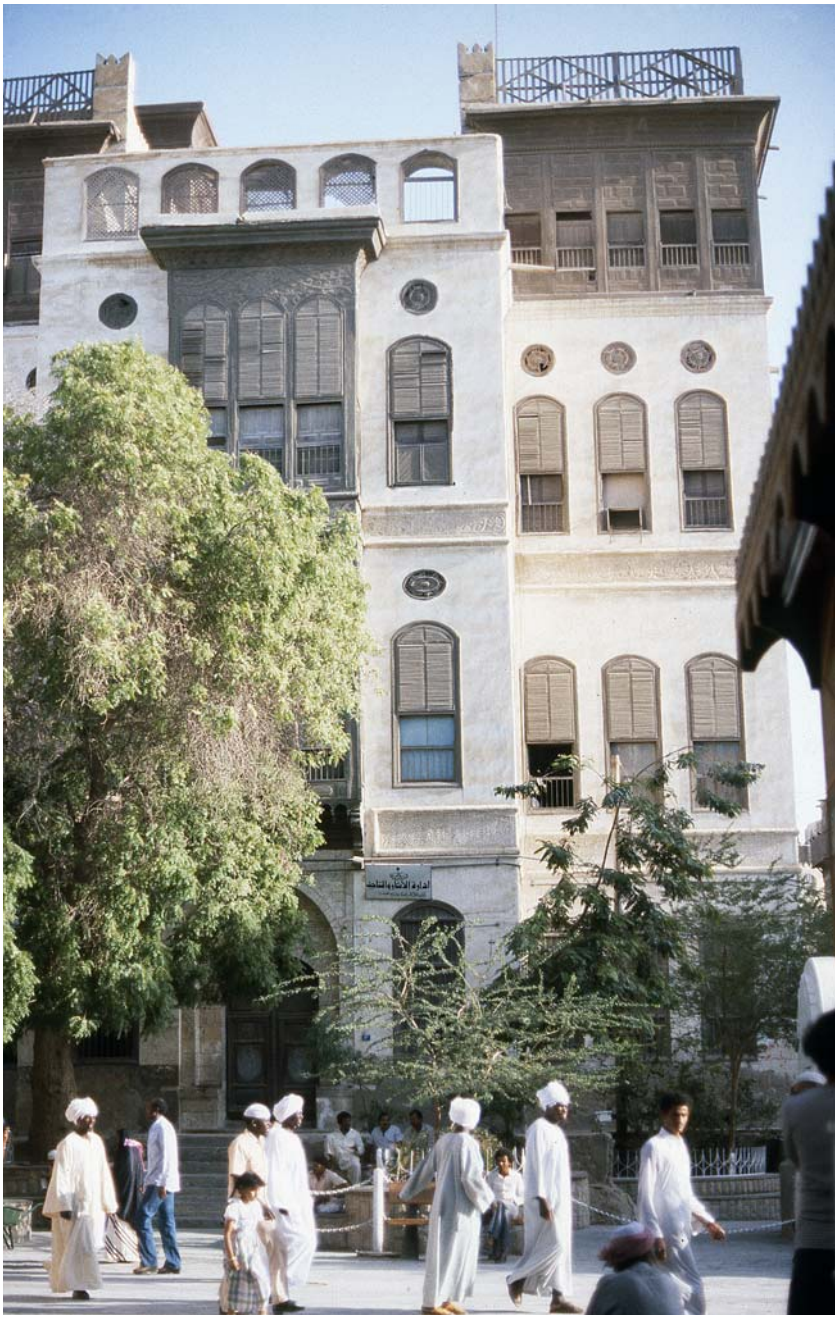

Figure 2. Bayt al-Naṣīf (now a cultural center and museum), Jidda, Saudi Arabia. Photograph by Paul Bonnenfant, 1984.

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activity.[9] Current archaeological work in the city of Suakin has unearthed evidence that supports a sixteenth-century date for at least one house on the island, Bayt al-Bāshā, but this early material is unique; in neighboring sites, comparable evidence does not become available for 300 more years.[10]

While it is difficult to date individual houses without foundation documents or epigraphic evidence, one can make some general assumptions about the scope and timeline of Red Sea building by looking at the history of the ports in consideration. All of the abovementioned port cities were under Ottoman rule from the sixteenth century. After taking Cairo in 1517, the Ottomans moved down the Red Sea coast, absorbing the ports that had been controlled by the Mamluks and then establishing themselves further south in sites such as Mocha in 1538 and Massawa in 1556.[11] While the Ottomans did not inaugurate any of these ports as new cities, they greatly expanded trade facilities and installed formal administrative structures in them. Ottoman control at each site varied from complete, to indirect, to temporary, but Turkish rule persisted around the Red Sea rim into the twentieth century. It is impossible to verify based on extant buildings, but it appears that the Red Sea architectural traditions in question emerged under Ottoman rule and that the shared administration of these ports facilitated the traditions' dispersal.[12] This proposal is bolstered by new archaeological data from Suakin, which suggests that the beginning of masonry construction on the island coincided with the sixteenth-century Ottoman arrival.[13]

However, the mechanisms by which these traditions were innovated and then disseminated are unclear. For that reason, the labels "Turkish" or "Ottoman," which are often used to define Red Sea buildings, are misleading.[14] Red Sea architecture did not come as an import from the imperial center; nor did the Turks impose Red Sea building as an official mode of construction. Rather, transient merchants and port officials constructed these buildings privately. Whereas the structure of Ottoman rule provided for a cross-regional network of exchange, as well as the economic underpinning for the construction of Red Sea buildings, it did not provide the language of construction. So, while acknowledging the central role that Ottoman administration may have played in the growth and development of these various port cities, the Red Sea style may not be assimilated to the dynamics offered by regional designations such as "Turkish" or dynastic appellations such as "Ottoman," which silence the transregional dimensions of these structures.

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Local and Imported Materials

The Red Sea ports in question shared their Ottoman administrative and political history but were also implicitly connected by the maritime matrices of trade and pilgrimage that tied the Red Sea to the Mediterranean Sea and the Indian Ocean. Thus, Red Sea architecture presents an appealing case of sustained cross-cultural continuity that breaches the conventional modern limits of continent and nation. The materials of Red Sea architecture represent, on one hand, its grounded nature within a local milieu, but on the other its reliance upon building products that were procured from afar through vibrant overseas connections.

The cross-cultural and transregional aspect of Red Sea architecture is evident when we consider one of its most prominent visual features, the elaborately carved woodwork. Indeed, wood appears in various forms on the facade of the Red Sea house. The most notable feature was the *rawshan* (pl. *rawāshin*), or wooden projecting window. Large enough for one or two people to sit in, it created an extended interior living space that combined street views with refreshing breezes. The *rawshan* usually featured a wide overhanging shade and shutters that opened to the exterior. While the *rawshan* could be found on houses in all of the major Red Sea ports, there was great diversity in its shape and decoration, as well as in its placement. For instance, many examples in Jidda were linked up vertically along the height of the building, constituting a second projecting facade to the house. (See Figure 2.) In Jidda, as well as in Yanbuᶜ al-Baḥr, Suakin, and Massawa, the *rawshan* often appeared on the ground floor. (See Figure 3.) In contrast, in the city of Mocha, several *rawāshin* could adorn a given house facade, but one was always placed singly right above the doorway as a framing element, sometimes undergirded by decorative brackets or rounded bottoms.[15] (See Figure 4.) In Massawa, the *rawshan* could be made from a wide, tall balcony screened from the exterior, as visible in the Bā Hamdūn house, probably built in the 1860s.[16] (See Figure 5.) In addition to the *rawshan,* nonprojecting windows and balconies were shaded from the sun by elaborately carved grilled screens. Doors were also subject to extensive carving on their lintels (often bearing inscriptions), projecting joists, floral jambs, and double slabs.

But, in the arid region of the Red Sea coast, high-quality durable wood was not easy to come by. It is generally accepted that most of the wood used in Red Sea houses came from overseas rather than being brought

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Figure 3. *Rawshan* of Bayt Khurshid Effendi (now in ruins), Suakin, Sudan. Photograph taken 1923–31, Collection of H. C. Jackson. Reproduced by permission of Durham University Library, SAD 484.013.027.

from adjacent inland areas. Textual sources, material remains, and oral testimony provide evidence that Asian hardwoods, namely *Tectona* (teak) and *Shorea* grown in southern India, Myanmar, and Java, were brought to the region by sea.[17] These relatively resilient imported hardwoods stood up to the humidity, salt water, and temperature fluctuations of the coast, while also serving as convenient ballast for Indian Ocean–going vessels.[18]

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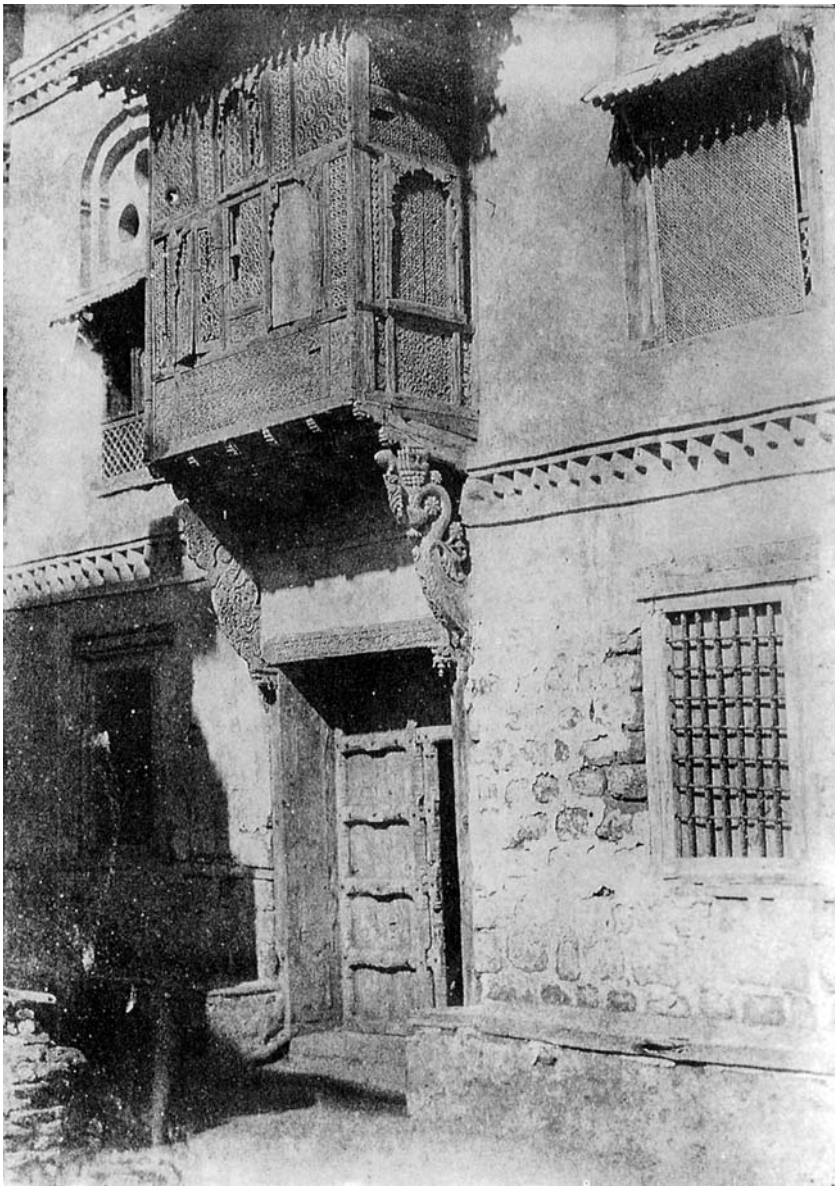

Figure 4. *Rawshan* of a house (now destroyed), Mocha, Yemen. Photograph by Auguste Bartholdi, 1856. Used with permission of the Musée Bartholdi, Colmar France, reprod. C. Kempf.

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Figure 5. Bā Hamdūn house, Massawa, Eritrea. Photograph by Dennis Rodwell, © Dennis Rodwell.

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However, recent work at Suakin has identified local types of wood, such as *Acacia* and *Ficus,* in historic houses as well, suggesting that the assumption of imported wood may require greater scrutiny and that more samples need to be tested in the future.[19]

Although coralline limestone (usually referred to as coral rock) is cited as the most common building material for Red Sea houses, it must be acknowledged that basalt and brick were used instead in Mocha and al-Ḥudayda.[20] These exceptions disrupt the assumption that Red Sea buildings rely exclusively on coral rock construction. Moreover, in addition to its decorative role, wood also fulfilled a major structural function that can hardly be perceived by the casual viewer. The courses of coral rock (or brick) were supported by wooden laths, called *qandal,* which provided the structural strength for the wall, particularly as the individual units settled over time. Thick layers of plaster coated the walls, thereby preventing water seepage that could compromise the house's structural integrity. These wooden laths, which were markedly less visible than their ornamental counterparts, were also often sourced from Asian hardwood, although East African mangrove could be used as well. Both types of wood were conveyed by sea through Indian Ocean channels.

As in many vernacular traditions, Red Sea houses relied upon a repertoire of construction components, such as coral rock and basalt that were immediately available. But these houses also depended on the ready availability of foreign wood for their ornate language of external decoration, as well as for the structural integrity of their fabric. Hence the locally grounded building practices of the Red Sea were equally defined by a reliance on the Indian Ocean trade, a connection that is exemplified by the case of Bayt al-Naṣīf in Jidda. According to local lore, the owner and patron Shaykh ᶜUmar Effendi al-Naṣīf purchased a wrecked ship made of teak in order to salvage the wood for the construction of his uncharacteristically large residence.[21] In the Red Sea region, Asian hardwoods served as convenient ballast in teak-built boats, were exchanged as lucrative commercial products, and were used as key construction materials for a distinctive mode of housing.

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Surfaces and Spaces

Woodwork, along with numerous variations of plasterwork that can be found on Red Sea house exteriors and interiors, presents an image of relative decorative continuity across sites. But, when we look beyond the surfaces of these houses and pay attention to their plans, elevations, and sections, we can begin to take apart any singular notion of the Red Sea house.[22] Rather than seeing one particular house type, we see that there are at least three different types of Red Sea houses, and in fact more than one type may be found in a single city.

The classic Red Sea house is two or three stories high. (See Figure 6.) The lowest level served commercial purposes with storerooms and at least one reception room. The lived space of the house was located on the upper floors, which offered a kitchen and sleeping areas. The roof terrace served as an important extension of the living space in the hottest months of the summer. So each level of the house was employed in a different way according to daily and seasonal temporal rhythms. This house type could be found in Mocha, Suakin, and Yanbuᶜ al-Baḥr.[23] Although firm dating is difficult to establish, it may have been in use as early as the eighteenth century.

While the tower house is a common residential type found in the inland Arabian Peninsula, it occurs on the Red Sea coast only in Jidda. Here, a lofty configuration reaches as high as seven or eight stories, with each level repeating a consistent floor plan and a spiral staircase as the newel of the house linking all of the floors together. The tower house concept was driven by the social interest of grouping an extended family in a single dwelling. Each level, which possessed the basic living facilities of a latrine and sleeping quarters, housed a nuclear family unit, and a single kitchen usually served the needs of the whole household. (See Figure 7.) Here, as well, the ground floor served commercial purposes, with warehouses and offices. With multiple *rawāshin* linked up along the facade, verticality was its key feature. Again, the dating is unconfirmed, but it has been suggested that the Red Sea tower house type may have been a relatively late innovation, appearing by the early twentieth century.[24]

While the majority of houses around the Red Sea are defined by multistory elevations, some exhibit low-lying plans oriented around large open-air courtyards. A key example was the sprawling Bayt Khurshid Effendi in Suakin. (See Figure 8.) The living spaces of this house, including a decorated

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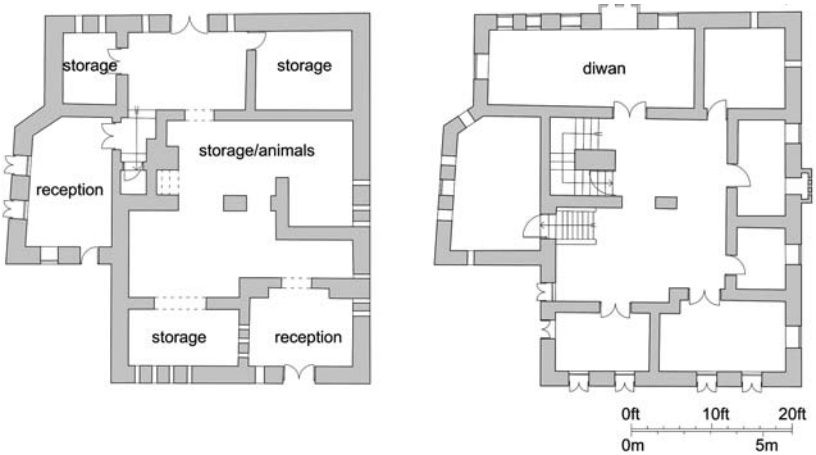

Figure 6. Ground-floor plan (left), First-floor plan (right), Bayt al-Maḥfadī, Mocha, Yemen. Drafted by Senem Zeybekoglu.

Figure 7. Plans of the bottom four floors of a five-story house in Jidda, Saudi Arabia. Drafted by Anwar Ibrahim, adapted from Bonnenfant, "La maison dans la péninsule arabique," 775–776.

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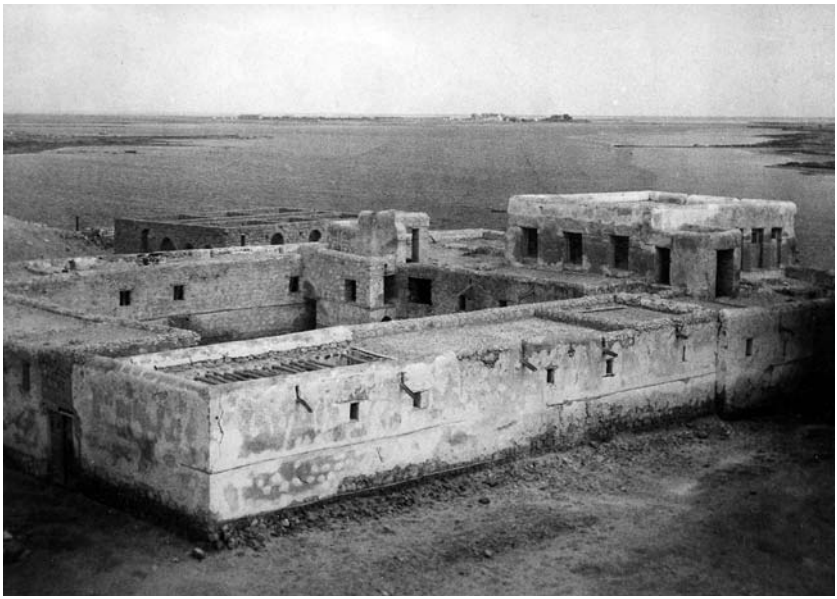

Figure 8. Bayt Khurshid Effendi (now in ruins), taken from the southwest from the roof of a neighboring house, Suakin, Sudan. Photograph by Jean-Pierre Greenlaw, 1945–51. Reproduced courtesy of the Sudan Archaeological Research Society, London, © SARS Greenlaw Archive GRE P148.02.

dīwān with built-in benches, were clustered on one side of the courtyard, close to the sea, while the service and storage facilities could be found on the other side. Recent archaeological evidence supports a sixteenth-century date for a similar specimen, thereby bolstering the notion that this low-lying type may represent the earliest model of Red Sea building.[25] But it should be noted that Bayt Khurshid Effendi achieved the shape exhibited in Figure 8 only in the nineteenth century, after several stages of rebuilding and expansion.[26] Moreover, another significant example of this type, Bayt al-Wadūd in al-Luḥayya in Yemen, was constructed in the early twentieth century.[27] Even if its origins are quite ancient, this house type appears to have had a relatively long life in Red Sea port cities.

So it can be said, then, that Red Sea buildings share a common architectural skin that consists of prominent signs applied to the buildings' exterior and interior surfaces, such as the *rawshan,* the plasterwork, and other decorative elements. But Red Sea house organizational schemes display diverse approaches to the architectural footprint, the relationship between

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interior and exterior space, and the internal deployment of rooms. Rather than embodying a coherent spatial continuity, the Red Sea style is constituted by an external membrane that is exceedingly malleable to a number of different spatial configurations. It is essentially an architectural sheath.

Functional Duality

Because the Red Sea style is a nonmonumental tradition, the private house, rather than religious or public buildings, plays a central role. For the business-oriented merchants and officials of the Red Sea ports, the house doubled as a site for commercial activity.[28] So, in addition to the classic residential features that one would expect to find in such structures, domestic spaces were allocated as commercial meeting rooms and warehouses. As an example, in the Suakin house of ᶜUmar Effendi ᶜUbayd (Figure 9), the ground floor was outfitted with two sitting rooms with built-in benches (referred to here as *dihlīz*), where merchants could conduct their negotiations, perhaps accompanied by the burning of incense and the serving of coffee. The two storage spaces on that level were conveniently located so that a visiting merchant could examine his desired goods directly. This house also had a ground-floor guest room, located in the southeast, for a traveling merchant to stay in. Commercial activity could be conducted with little disturbance to the family members above, who could gain access to their upper-story living spaces through a back entrance that led directly to the stairway.

So the ground floor of the multistory Red Sea house was conceived as a quasi-public space. For instance, in premodern Jidda, ground floor rooms could be let out to transient pilgrims.[29] In eighteenth-century Mocha, civic functions tied to trade activity could take place in the space of the home. There, prominent merchants were given the privilege of bypassing the Customs House when they disembarked at the port. They brought their goods directly to their home-based warehouses, which a port official would later visit in order to tally the merchandise.

While this domestic commercial functionality is in no way limited to Red Sea port cities, it is particularly noteworthy in the Muslim context, where the house is often equated with relatively strict notions about family privacy. The usual expectation is that commercial activity in Muslim cities would be relegated to the public sphere in dedicated facilities such as the

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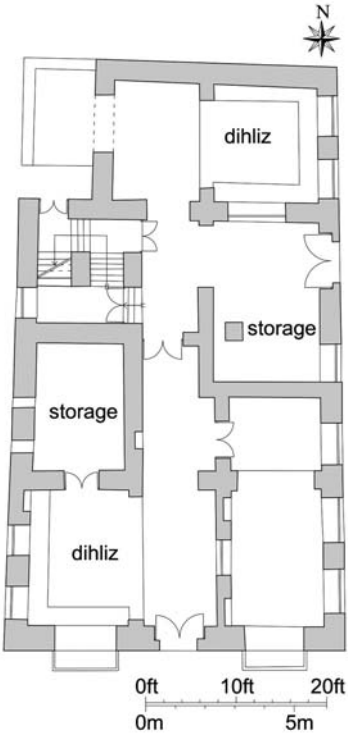

Figure 9. Ground-floor plan, Bayt ᶜUmar Effendi ᶜUbayd (now destroyed), Suakin, Sudan. Drafted by Senem Zeybekoglu.

wikāla, khān, funduq, sarai, or *samsara.* Although negotiations and meetings could take place in the space of the house, as they often did in cities such as Cairo or Damascus, the elite merchant's house of the Red Sea port city is rare in housing dedicated built sites for domestic commercial activities, often in the absence of public commercial buildings.[30]

Ruins and Decay

Red Sea architecture has been, perhaps since its emergence, on the brink of being lost. Its construction is fragile, encased in layers of plaster that need to be renewed on a continual basis so that the harsh conditions of the coast do not eat away at its internal core. But in these port cities with transient inhabitants, houses often suffered from absent landlords and a lack of consistent upkeep. Moreover, builders sometimes took shortcuts by

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leaving out the crucial, but costly, wooden supports from the walls or by mixing lime plaster with readily available salt water.[31]

It is important to note that this issue of decay is not only a modern concern. Even during the heyday of some of these ports, observers noted that Red Sea cities possessed a progressive aspect, with crumbling buildings scattered among more solid standing examples.[32] Many remarked that the cities appeared from the sea to have a monumental aspect, but when one entered, degradation and decay dominated the internal fabric. So it can also be said that Red Sea building has been defined by the ever-present motif of decay.

But certainly, many Red Sea cities declined rapidly beginning in the twentieth century. In some cases, new modern ports lured activity away from previous centers. In other cases, battles, political upheavals, or natural disasters destroyed the older ports, eventually leading to the demise of local building traditions. A key example is Suakin, which was passed over for British-built Port Sudan, which opened in 1909 as an alternative to the long-lived pilgrimage and trade center of Suakin. Although Suakin's commercial activity continued for a couple of decades afterward, the city was in ruins by the 1940s.[33]

I would argue that the Red Sea style may be defined by its relative deterioration, rather than its structural integrity. In fact, one could say that the past of Red Sea building has almost always been envisioned with an interest in its possible future, because the impending ruin of these cities has motivated modern interest in them. For example, one of the earliest documentary articles written about the city of Suakin (written in 1955 by Matthews, the author who spearheaded the Red Sea style) included an appeal for preservation.[34] Awareness of Jidda's architectural heritage emerged as the Old City or "al-Balad" deteriorated when wealthy Jiddawis moved to newly built modern housing outside of the historic core in the second half of the twentieth century.[35] So in fact, awareness of Red Sea architecture was born and has been sustained due to fear of its imminent loss.

Indeed, heritage specialists are currently in the process of restoring certain Red Sea cities, such as Suakin, Jidda, and Yanbuᶜ al-Baḥr. So the Red Sea style may not be cast as a static traditional mode on the brink of disappearance. Rather, it is being actively reconfigured today. But this contemporary process of rebuilding and restoration is uneven in its distribution across and along the Red Sea coasts. The architecture of the Red Sea port

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cities that have not experienced the fortunes of the modern era, like those in Yemen and Eritrea, crumbles away untended. For instance, in Mocha, local residents have avidly sponsored the rebuilding of religious structures, but not residential ones. In Massawa, the Cultural Assets Rehabilitation Project (CARP), which published a guide to the city's historic structures and avidly explored conservation efforts, is now no longer active.[36]

Indeterminate Exoticism

Ultimately, the Red Sea style is not an organic grouping but rather a category that modern viewers and scholars have constructed and then applied retroactively. So the Red Sea style was born only in 1953, when it was initially given a name and a concrete shape, not in the early sixteenth century when Red Sea ports were first built in the mode that I have described above.

In addition to perennial decay, one could argue that another enduring motif of the Red Sea style is its perceived foreignness. Indeed, the houses of the Red Sea appear to be quite similar to one another not only because of the features that they share, but also because of the fact that most of these cities seem to differ quite starkly from their inland neighbors.[37] Whereas those inland traditions have been embraced today as national styles and thus have been assigned indigenous origins, Red Sea buildings are often cast as alien and foreign, essentially imported from somewhere else.[38]

For instance, in his 1953 article, Matthews called Suakin "Arab in character" but "varied by the works of foreigners who in the past have settled on the shores for the purposes of trade or conquest," citing the Egyptians, Turks, Italians, Indians, Yemeni Jews, and British.[39] For the Red Sea port cities of Yemen, John Nankivell claimed that these coastal towns, "like so many colonial settlements, show the influences of the builders' attempt . . . to make themselves feel at home."[40] In regard to Jidda, writing for a popular audience in *Aramco World Magazine,* Harry Alter wrote that the city's architecture is "likely a composite of many foreign influences."[41] Architect Steven Ehrlich called Red Sea building "a Turco-Egyptian amalgam of styles."[42]

This enduring perception of foreignness appears most clearly in writings about the *rawshan,* or projecting window, as the key architectural feature of the Red Sea house. French sociologist Paul Bonnenfant proposed that the

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rawshan was considered an outward sign of the riches of the inhabitants and hence served as a potent signifier on the house facade.[43] Yet almost every observer of the Red Sea *rawshan* has cast the inspiration for the structure and decoration of this ubiquitous form as decidedly exotic.[44] However, the proposed sites of origin and the multiple vectors of linkage are as varied as the form of the *rawshan* itself.

For instance, some have tried to locate the Red Sea *rawshan* comfortably within the rubric of Ottoman heritage, thereby assuming that the political rule of the Ottomans entailed a necessary migration of domestic architectural forms from Anatolia to the Red Sea. E. Hansen, who produced a report on Suakin for UNESCO in 1972, called the joinery of the windows "typical of Turkish architecture."[45] Sultan Mahmud Khan, writing about the historic houses of Jidda, identified the projecting *rawshan* as the descendant of the cantilevered upper stories and projecting windows of houses in Turkey, suggesting a mode of transmission through the Mediterranean, through Egypt, and finally down the Red Sea coast.[46] Fernando Varanda, in his foundational study of Yemeni domestic architecture, called the balcony or projecting window a result of "Turkish influence."[47]

For at least one other prominent observer, the widespread use of the *rawshan* served to confirm the Red Sea style as a quintessentially Islamic type, replicating forms seen in the Holy Cities of Islam, Mecca and Madīna, as well as nearby Ṭāʾif. Relying on the visual evidence of the *rawshan,* in addition to other features, the artist Jean-Pierre Greenlaw traced a chain of conveyance from these historic inland cities of the Ḥijāz region through the port of Jidda to the other settlements around the Red Sea. He presented this mode of transmission in clear and unequivocal terms, calling the houses of Suakin "the product of the sober, mature and unpretentious culture of Islam nearest its source, in Medina and Mecca," thereby casting Suakin as an "architectural colony" to Jidda.[48]

In the most common framework, the Red Sea *rawshan* has been collapsed, almost indistinguishably, with its Mediterranean counterpart, the *mashrabiyya.* Indeed, in most writings about Red Sea architecture, the less common term *rawshan* is avoided and the more widespread label *mashrabiyya* is used.[49] The term *mashrabiyya* refers to a ubiquitous feature of the traditional architecture of the city of Cairo, the projecting windows made of lattices of turned wood, a key device that managed both climate and family privacy in the space of the house. (See Figure 10.) Although the

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Figure 10. *Mashrabiyya*, Palace of Amir Bashtak, Cairo, Egypt. Photograph by Henning L. Bauer, 2010.

visual and structural connections between the Cairene *mashrabiyya* and the Red Sea *rawshan* are undeniable, the *mashrabiyya* was usually made of ebony or beechwood, unlike the *rawshan,* which was often crafted from imported teak. Moreover, the *rawshan* often used flat carved openwork screens and rarely pieces of turned wood.[50] Additionally, the etymology of the terms

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is quite different.[51] While the term *rawshan* has geographic and temporal specificity to the early modern and modern Red Sea and *mashrabiyya* to the Mediterranean during the same time, the *rawshan* is often collapsed with the northern *mashrabiyya* and cast as its direct descendant. This assertion, which confirms the wide scope of Egypt's political, economic, and cultural influence around the wider region, could be made for the ports that experienced increased building activity under Egyptian rule in the second half of the nineteenth century, such as Suakin and Massawa. But other ports of the Red Sea coast may not be readily folded into this category.

Others have looked further south and east and drawn connections between the building traditions of the Red Sea and the extended Indian Ocean. Again, the *rawshan* appears as the primary site for the confirmation of these cross-cultural connections. For instance, Bonnenfant drew a potent visual connection between Gujarati Indian sculptural traditions and the bird-shaped brackets of a particularly ornate *rawshan* from Mocha, as documented in a historic photograph.[52] (See Figure 4.) Varanda, who represented certain Yemeni Red Sea woodworking traditions as Turkish, assigned others a wholly Indian origin.[53] Others claimed that some of the wood that was imported from Southeast Asia was delivered from its point of origin already carved.[54] Sondra Hale suggested that many aspects of Suakin's buildings were reminiscent of the plaster carving and woodwork of the Swahili coast, found in Mogadishu, Lamu, Kilwa, Zanzibar, and other cities.[55] It has also been proposed that the seagoing lascars of Indian vessels carved pieces of wood for Jidda's houses as they waited while docked at the port between their long sea journeys.[56] As King has stated, this piece of urban folklore is probably untrue; nevertheless, it sheds light on the perception of Red Sea woodcarving and design as coming from the maritime traditions of the east.[57]

It should be clear that most observers of Red Sea architecture have eagerly traced the *rawshan*'s origins to places outside of the immediate region.[58] Although certain aspects of this may be more plausible than others, I am not interested in determining which of these potential antecedents or influences should be privileged. In fact, I prefer to follow the suggestion of the authors of a Yemeni coastal survey, who stated that "the entire question of foreign influence . . . may prove ultimately intractable, since the many strands woven from centuries of trade, migration and occupation in the Red Sea and Indian Ocean basin are knottily intertwined."[59] Rather, my intention

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is to reveal how observers of Red Sea architecture cope with its difference from locally dominant built models by casting it as an alien introduction, but one relatively naturalized to the local environment. Essentially, the *rawshan,* arguably the most prominent element of Red Sea architecture, has been subject to sustained exoticization by its modern observers. And, by extension, like the *rawshan,* the Red Sea house is understood to possess an implicitly foreign, but apparently indeterminate, identity.

Conclusion

The historic Red Sea style crossed the artificiality of the continental divide, offering the possibility that architecture may have played a critical role in defining an early modern cosmopolitan maritime community. In this article, I have confirmed the unity of the Red Sea style, but I have done so by moving beyond its superficial visual aspects. Instead, I have tried to take the Red Sea house apart, starting from its core building materials and ending with its modern construction.

NOTES

A previous version of this article was published as a work in progress, with the title "Reconsidering Red Sea Architecture: Building Traditions at the Hinge between the Mediterranean Sea and the Indian Ocean," *Traditional Dwellings and Settlements Review Working Papers Series* 226 (2010): 37–60. The author wishes to thank the helpful anonymous reader who added numerous important corrections and comments to the first draft of this article. I am also grateful to Anwar Ibrahim and Marcia Focht, who produced and modified images for this publication. Paul Bonnenfant, Dennis Rodwell, and Henning Bauer, in addition to the Sudan Archaeological Research Society, the Musée Bartholdi, and the Durham University Library, generously allowed me to use their photographs here.

1. For instance, see Carsten Niebuhr, *Travels through Arabia and Other Countries in the East* (Edinburgh: R. Morison and son, 1792; Beirut: Librairie du Liban, repr. 1968), 1:212–51; George Annesley, Earl of Mountnorris, *Voyages and Travels in India, Ceylon, the Red Sea, Abyssinia, and Egypt, in the Years 1802, 1803, 1804, 1805, and 1806* (London: W. Miller, 1809), 3:289–360.

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2. These cities have been selected because they were major coastal trading posts and their architecture is documented. Other towns that have been grouped in this category, such as al-Wajh and al-Qunfudha in Saudi Arabia and Assab in Eritrea, are difficult to discuss because of a lack of documentation. Also, I do not include the Zabīd brick house from Yemen, with its variants in Kamarān and Farasān, and Sabya in Saudi Arabia, in this Red Sea grouping. They represent a distinct building tradition that is related to Red Sea building but not identical to it.
3. Derek Matthews, "The Red Sea Style," *Kush* 1, no. 1 (1953): 60–86. Matthews is known for his restoration and building work in Ethiopia, Sudan, and Yemen. For instance, he restored the inaccessible monastery of Debre Damo in Ethiopia in the 1940s. In the 1950s, he went on to work for the colonial Sudan Antiquities Service, which charged him with documenting the city of Suakin. Then he used the classic forms from Suakin's architecture to design the Baladiyya building in Omdurman, thereby transporting Red Sea motifs into the modern language of building in the Nile Valley. Later, in 1977, he designed the International School in Sanaa, Yemen.
4. The desire to locate traditional building practices in the present, rather than mired in the past, responds to an enduring concern in vernacular architectural studies. Dell Upton, "The Tradition of Change," *Traditional Dwellings and Settlements Review* 5, no. 1 (1993): 9–15; Marcel Vellinga, "Engaging the Future: Vernacular Architecture Studies in the Twenty-First Century," in *Vernacular Architecture in the Twenty-First Century: Theory, Education and Practice,* eds. L. Asquith and M. Vellinga (London and New York: Taylor and Francis, 2006), 81–94.
5. Matthews, "The Red Sea Style"; Matthews, "Suakin Postscript," *Kush* 3 (1955): 99–111; E. Hansen, *Preservation of Suakin, October–November 1972* (Paris: UNESCO, 1973); Jean-Pierre Greenlaw, *The Coral Buildings of Suakin: Islamic Architecture, Planning, Design and Domestic Arrangements in a Red Sea Port* (Published privately, 1976; London: Kegan Paul, 1995); Friedrich Hinkel, *The Archaeological Map of Sudan,* vol. 6 (Berlin: Akademie Verlag, 1992); Abdel-Rahim Salim, "Suakin: On Reviving an Ancient Red Sea Port City," *Traditional Dwellings and Settlements Review* 8, no. 2 (1997): 63–74; Michael Mallinson, "Suakin 2003/4," *Sudan and Nubia* 8 (2004): 90–94; Mallinson, Laurence Smith, Colin Breen, Wes Forsythe, and Jacke Phillips, "Ottoman Suakin 1541–1865: Lost and Found," in "The Frontiers of the Ottoman World," *Proceedings of the British Academy* 156 (2009): 469–92;

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Mallinson, "Suakin Project—History and Research towards a New World Heritage Site," unpublished report, 2010; Colin Breen, Wes Forsythe, Laurence Smith, and Michael Mallinson, "Excavations at the Medieval Red Sea Port of Suakin," *Azania: Archaeological Research in Africa* 46, no. 2 (August 2011): 205–20.

6. Other than those of the nineteenth-century Government Palace in Massawa, there are no published ground plans of houses in the city. References on Massawa include Francesco Siravo, *Preservation and Presentation of the Cultural Heritage—Asmara and Massawa* (Paris: UNESCO, 1995); Naigzy Gebremedhin, Edward Denison, and Mebrahtu Abraham, *Massawa: A Guide to the Built Environment* (Asmara: Cultural Assets Rehabilitation Project, 2005). For Yanbuᶜ al-Baḥr, see Geoffrey King, *The Traditional Architecture of Saudi Arabia* (London: I. B. Tauris, 1998), 26–32.
7. Greenlaw presented the most substantial and influential of these developmental discussions in relation to Suakin. In this skeletal model, he suggested that the original form of the Red Sea house was small and single storied and that later developments eventually led to the tower house. King endorsed this model for the Arabian coast as well. Greenlaw, *The Coral Buildings,* 22; Geoffrey King, "Review of *The Coral Buildings of Suakin: Islamic Architecture, Planning, Design and Domestic Arrangements in a Red Sea Port* (London, 1995)," *Bulletin of the School of Oriental and African Studies* 59, no. 2 (1996): 341; King, *Traditional Architecture,* 49. For a critique of Greenlaw's chronology, see Nancy Um, "Greenlaw's Suakin: The Limits of Architectural Representation and the Continuing Lives of Buildings in Coastal Sudan," *African Arts* 44, no. 4 (Winter 2011): 36–51.
8. King, *Traditional Architecture,* 49.
9. Gebremedhin, Denison, and Abraham, *Massawa,* 54; Jonathan Miran, *Red Sea Citizens: Cosmopolitan Society and Cultural Change in Massawa* (Bloomington: Indiana University Press, 2009), 146–51.
10. Mallinson et al., "Ottoman Suakin," 481; Breen et al., "Excavations," 212.
11. Giancarlo Casale, *The Ottoman Age of Exploration* (New York: Oxford University Press, 2010), 64, 108.
12. Most seem to adopt this position, except for King, who believed that the house types of Jidda were introduced in the pre-Ottoman period. King, *Traditional Architecture,* 48.
13. Breen et al., "Excavations," 216.
14. These labels have been critiqued by King for Jidda and by the authors of the

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Tihāma survey for Yemen. King, *Traditional Architecture,* 48; Francine Stone, "Introduction—Architecture," in *Studies in the Tihāmah: The Report of the Tihāmah Expedition 1982 and Related Papers,* ed. Francine Stone (Harlow, UK: Longman, 1985), 56.

15. On the rounded bottom *rawshan* of Mocha, see Nancy Um, "From the Port of Mocha to the Eighteenth-Century Tomb of Imām al-Mahdī Muḥammad in al-Mawāhib: Locating Architectural Icons and Migratory Craftsmen," *Proceedings of the Seminar for Arabian Studies* 41 (2011): 387–400.
16. Siravo, *Preservation and Presentation,* 39; Gebremedhin, Denison, and Abraham, *Massawa,* 129–31.
17. Laboratory analysis has identified *Shorea* found in Suakin, but Red Sea builders usually cite teak as a key construction material. The two are visually indistinguishable and may be differentiated only through laboratory analysis. Hinkel, *The Archaeological Map,* 221.
18. This tradition of conveying bulk construction materials from across the Arabian Sea is quite long-lived. As early as the first century C.E., the *Periplus of the Erythrean Sea* described the long-distance transport of wood from the east to the Arabian Peninsula region, and an Arabic source from the seventh century described Asian teak used in a mosque in Mecca. V. S. Pramar, *Haveli: Wooden Houses and Mansions of Gujarat* (Ahmedabad: Mapin Publishing, 1989), 41–42.
19. Mallinson et al., "Ottoman Suakin," 490.
20. In Jidda, the local coralline limestone is called *manqabī,* after the bay where it is quarried. King, *Traditional Architecture,* 46.
21. Ibid., 47.
22. John Nankivell made this astute pronouncement in regard to coastal Yemen. It is possible to extend it to the rest of the Red Sea region as well. John Nankivell, "Tihāmah Architecture—An Architectural Artist's View," in *Studies on the Tihāmah: The Report of the Tihāmah Expedition 1982 and Related Papers,* ed. Francine Stone (Harlow, UK: Longman, 1985), 58. Varanda presented a different view, assimilating all Yemeni Red Sea houses to the same model, which he described as having a "hierarchical spatial organization" much like that of the Yemeni tower house. Fernando Varanda, *The Art of Building in Yemen* (Cambridge, MA: MIT Press, 1982).
23. Nancy Um, *The Merchant Houses of Mocha: Trade and Architecture in an Indian Ocean Port* (Seattle: University of Washington Press, 2009), 138–49; Greenlaw, *The Coral Buildings,* 38–61; King, *Traditional Architecture,* 26–32.

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24. King, *Traditional Architecture,* 49.
25. Mallinson et al., "Ottoman Suakin," 481; Breen et al., "Excavations," 212; King, "Review," 341; Hansen, *Preservation of Suakin,* 5.
26. Jacke Phillips, "Beit Khorshid Effendi: A 'Trader's' House at Suakin," in *Navigated Spaces, Connected Places: Proceedings of Conference Red Sea V,* ed. D. A. Agius, J. P. Cooper, C. Zazzarro, and A. Trakadas (Oxford: BAR International Series, 2012, forthcoming), 188–99.
27. Paul Bonnenfant and Jeanne-Marie Gentilleau, "Une maison de commerçant-armateur sur la Mer Rouge: Bayt 'Abd al-Udud à al-Luḥayyah (Yémen)," in *Les villes dans l'empire ottoman: activités et sociétés,* ed. Daniel Panzac (Paris: CNRS Editions, 1994), 2:125–88.
28. Nancy Um, "Spatial Negotiations in a Commercial City: The Red Sea Port of Mocha, Yemen during the First Half of the Eighteenth Century," *Journal of the Society of Architectural Historians* 62, no. 2 (2003): 178–93; Um, *Merchant Houses,* 125–61.
29. Bizzie Frost, "Unraveling Jeddah's Urban Wonders," *Saudi Gazette,* 16 May 2011, http://www.saudigazette.com.sa/index.cfm?method=home.regcon&contentID=20110516100813 (accessed 12 July 2011).
30. It should be noted that modest merchants did not own houses in Mocha or carry out trade in this manner.
31. Mallinson, "Suakin Project"; King, *Traditional Architecture,* 47.
32. This aspect of Red Sea building has been brought out effectively by recent archaeological work in Suakin. See Mallinson, "Suakin Project"; Phillips, "Beit Khorshid Effendi."
33. On the city's ruins, see Um, "Greenlaw's Suakin;" David Roden, *The Twentieth Century Decline of Suakin,* (Khartoum: Sudan Research Unit, University of Khartoum, 1970). Recently, the port facility in Suakin was updated to cater to commercial travelers but also to the large number of pilgrims who use the port for Jidda.
34. Matthews, "Suakin Postscript," 100, 111. Under the auspices of the Sudanese National Corporation for Antiquities and Museums, the Suakin Project was launched in 2002. Utilizing the expertise of Sudanese and international scholars, the project oversees excavations and research in Suakin with the hope of rebuilding it as a UNESCO World Heritage site.
35. In the 1970s, a British firm was hired to produce a plan for the preservation of the old city of Jidda, in consultation with the city's mayor, M. S. Farsi, who was an avid cultural heritage advocate. By 1989, the municipality had

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restored around 30 historic houses, with private owners repairing 200 more. In 1990, the Jeddah Historical Area Preservation Department was founded to maintain the buildings in the old core of the city. John Christie, "A City within a City," *Aramco World Magazine* 38, no. 5 (September/October 1987): 12; "Project summary of Jeddah Old Town Conservation," report to the Aga Khan Award for Architecture, 1989, http://archnet.org/library/files/one-file.jsp?file_id=327 (accessed 16 December 2011).

36. Gebremedhin, Denison, and Abraham, *Massawa;* Dennis Rodwell, "Asmara: Conservation and Development in a Historic City," *Journal of Architectural Conservation* 10, no. 3 (2004): 44; e-mail communication from Dennis Rodwell, 1 June 2010.
37. Jidda's building tradition is the only one in the Red Sea region that is linked to those found in its immediate hinterland in the Ḥijāz. But, within the national discourse of Saudi Arabia, Ḥijāzi identity has been suppressed as a regional style under the dominant Najdi norms. See Mai Yamani, *Cradle of Islam: The Hijaz and the Quest for Identity in Saudi Arabia* (London: I. B. Tauris, 2009).
38. For a critique of the model of alien coastal identity, see Miran, *Red Sea Citizens,* 17–19. As mapped out by Miran, some recent scholarship has refuted this model by portraying Red Sea port cities as tied to their inland regional interiors, as well as to their overseas partners. See also Um, *Merchant Houses;* Roxani Margariti, *Aden and the Indian Ocean Trade: 150 Years in the Life of a Medieval Arabian Port* (Chapel Hill: University of North Carolina Press, 2007).
39. Matthews, "The Red Sea Style," 60.
40. Nankivell, "Tihāmah Architecture," 58.
41. Harry Alter, "Jiddah's Balconies: 'Splendid, Bright,'" *Aramco World Magazine* 22, no. 5 (September/October 1971): 29.
42. Steven D. Ehrlich, "Reflections on the Vernacular Architecture of the North Yemen Tihāmah," in *Studies on the Tihāmah: The Report of the Tihāmah Expedition 1982 and Related Papers,* ed. Francine Stone (Harlow, UK: Longman, 1985), 100.
43. Paul Bonnenfant, "La maison dans la péninsule arabique," in *L'habitat traditionnel dans les pays musulmans autour de la Mediterranée,* ed. Jean-Claude Garçin (Cairo: Institut français d'archéologie orientale, 1991), 3:777.
44. Additionally, the contention has been made that the *rawshan* derives from the projecting windows found in pre-Islamic and Islamic forts. Sultan

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Mahmud Khan, *Jeddah Old Houses: A Study of Vernacular Architecture of the Old City of Jeddah* (n.p.: Saudi Arabian Council for Science and Technology, 1981), 12.

45. Hansen, *Preservation of Suakin,* 7.
46. Khan, *Jeddah Old Houses,* 12. While the projecting windows of Red Sea houses may bear some visual and structural similarity to the upper levels of Turkish facades that jut out over the streets shading the area below, this facile connection certainly overlooks the fact that the *rawshan* in Suakin, Massawa, Yanbuᶜ al-Baḥr, and Jidda may also be located on the ground floor.
47. He also labels other elements of decorative woodwork as "Turkish." Varanda, *Art of Building,* 125, 145.
48. Greenlaw, *The Coral Buildings,* 59; King, "Review," 341. While the visual connections between the Ḥijāzi tower houses of Mecca, Madīna, and Ṭāʾif and the Red Sea style are undeniable, the dearth of early dated examples and premodern visual documentation renders this chain of transmission impossible to verify. Also, according to Sondra Hale, this "Arabian bias" privileges the heartland of Islam and its core maritime hub, Jidda, while overlooking the Red Sea style's possible connections to coral building traditions along the Swahili coast. Sondra Hale, "Review of *The Coral Buildings of Suakin* by Jean-Pierre Greenlaw," *African Arts* 10, no. 4 (July 1977): 6.
49. Today, the term *rawshan* is used only in Suakin, Jidda and Yanbuᶜ al-Baḥr. In the 1980s, Varanda claimed that the term *ṭāqa* was used more commonly than *rawshan* in al-Ḥudayda. Varanda, *Art of Building,* 158. A UNESCO study of Massawa suggested that the term was no longer used there in the 1990s, but according to Miran's archival work with local court registers, *rawshan* was used commonly in the nineteenth century. Siravo, *Preservation and Presentation,* 39; Miran, *Red Sea Citizens,* 147, 242, 247, 256. The Cairo Geniza documents provided evidence that the term *rawshan* was used to refer to a projecting window in Cairo as early as the year 1000 and through the year 1285. D. S. Richards, "Arabic Documents from the Karaite Community in Cairo," *Journal of the Economic and Social History of the Orient* 15, nos. 1/2 (June 1972): 113; S. D. Goitein, *A Mediterranean Society: The Jewish Communities of the World as Portrayed in the Documents of the Cairo Geniza* (Berkeley and Los Angeles: University of California Press, 1983, 1999), 4:61, 364–65 n. 72, 365 nn. 73, 74. Eventually replacing the

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term *rawshan, mashrabiyya* came into use much later, first appearing in *waqf* documents in the early sixteenth century. Doris Behrens-Abousseif, "Mashrabiyya," *The Encyclopedia of Islam, New Edition* (Leiden: Brill, 1991), 6:718.

50. Alter, "Jiddah's Balconies," 31.
51. The word *mashrabiyya* derives from the Arabic root meaning "to drink" and likely points to the *mashrabiyya's* function as a cooling device for jugs of water. *Rawshan,* on the other hand, comes from Persian and means "light," thereby pointing to a different aspect of the window's filtering function. A couple of studies of Jidda's houses claimed that the word *rawshan* comes from "rushaandan," or a pierced ventilator found in north Indian architecture. Ashraf Salloum, "'El Rawashin' of Jeddah Saudi Arabia," in *Passive and Low Energy Architecture,* Proceedings of the Second International PLEA Conference, 1983, ed. Simos Yannas (Oxford: Pergamon Press, 1983), 247, n. 1; E. Aljolfi, "The Potentiality of Reflected Sunlight through *Rawshan* Screens," in *Passive and Low Energy Cooling for the Built Environment,* May 2005, Santorini, Greece, 817.
52. Paul Bonnenfant, "La marque de l'Inde à Zabîd," *Chroniques Yéménites* 8 (2000), http://cy.revues.org/document7.html (accessed 27 May 2010).
53. Varanda, *Art of Building,* 162.
54. Greenlaw, *The Coral Buildings,* 103; Bonnenfant, "La maison dans la péninsule arabique," 779.
55. Hale, "Review," 6. For other East African connections, see Um, *Merchant Houses,* 159–61.
56. James Buchan, *Jeddah Old and New* (London: Stacey International, 1980), 10.
57. King, *Traditional Architecture,* 47.
58. At least one writer has praised the *rawshan* of Jidda as an inherently local mode of traditional nonmechanized cooling technology that functions in accordance with Muslim social norms. His goal of presenting the *rawshan* as a traditional alternative to the now ubiquitous air conditioner in Jidda was decidedly nostalgic. Salloum, "'El Rawashin'," 247–50.
59. Stone, "Introduction," 56.

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