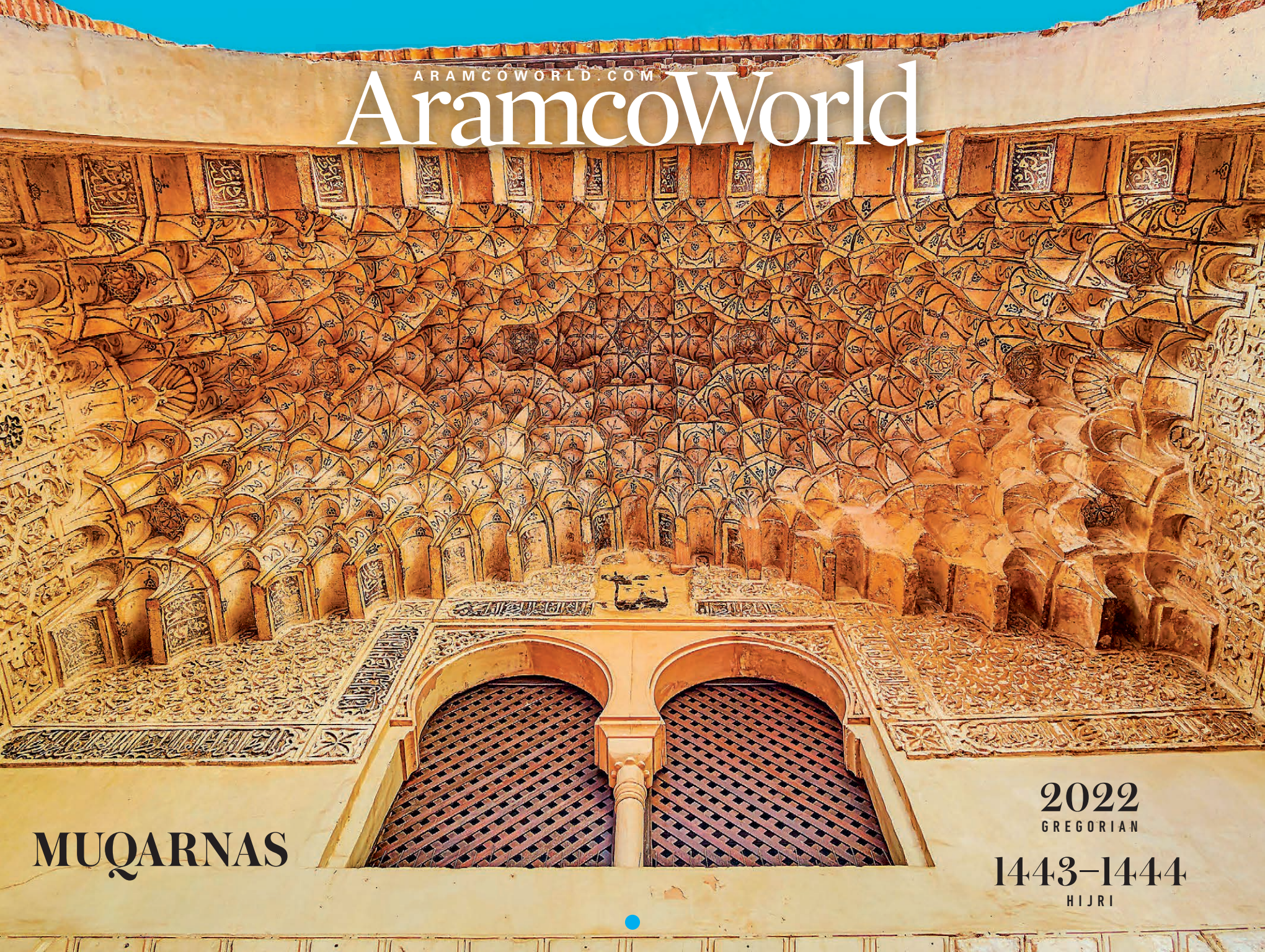


ARAMCOWORLD.COM

AramcoWorld



MUQARNAS

2022
GREGORIAN

1443-1444
HIJRI

MUQARNAS

Introduction by SHEILA BLAIR and JONATHAN BLOOM

Dazzling, prismatic and intricately symmetrical, muqarnas is a stunning three-dimensional decoration unique to Islamic architecture.

Made of plaster, brick, glazed tile, wood or stone, muqarnas (moo-KAR-nas) is characterized by sloping tiers of niche-like cells that alternate with brackets and stalactite-like pendants projecting and hanging over those below. Although scholars generally believe that the word in Arabic derives from the Greek *koronis* and Latin *coronis*, no Arabic dictionary explains the way it is used in Islamic architecture, suggesting that it is a popular or technical term rather than a literary one. Medieval chroniclers rarely mentioned the term; one exception was the 12th-century-CE Andalusian traveler Ibn Jubayr, who wrote of a minaret he saw in Makkah: “It has carvings in the plaster of elongated form as if they were *mihrahs*. It is surrounded by *qarnasa* of exquisite workmanship.” Despite muqarnas’s scant presence in the literary record, it is one of the few architectural forms that became popular in a variety of materials across the Islamic lands from the Atlantic to the Indian Ocean.

Muqarnas was used in different ways: It could separate parts of a building, fill corner squinches and pendentives that support domes, and cover the inner surfaces of domes or vaults. While muqarnas appears to be a structural element, muqarnas vaults made of wood, plaster and tile are usually ornamental, attached to load-bearing structures hidden behind them. Stone muqarnas has to be self-supporting due to its great weight, but it is often embellished with dangling, even delicate stone pendants. Plaster and brick muqarnas were often colored with paint or

glazed tile. In all cases, muqarnas presents a stunning visual effect as light sparkles over its variegated convex and concave surfaces.

The origins of the muqarnas itself are no clearer than those of the name. The earliest surviving example found to date *in situ* is the squinch over the corner of a 10th-century-CE monument at Tim, located in southern Uzbekistan. It was in the 11th century that muqarnas spread throughout the lands of Islam, and it seems likely that it radiated from a central location—presumably Baghdad in Iraq, then capital of the Abbasid empire. Iraqi examples of muqarnas vaults from the 11th and 12th centuries are notable for their exteriors that resemble pinecones, with protrusions that mirror the niches inside. In Syria, builders followed Iraqi examples in plaster and translated them into cut stone. In Egypt, builders used brick and particularly stone muqarnas to separate or crown the stories of buildings and to embellish the interiors of vaults over doorways and rooms.

By the 12th century, muqarnas appeared farther west in Algeria, Morocco and al-Andalus (now southern Spain). Initially it was used sparingly, but renovations in 1134 to the Qarawiyyin mosque in Fez, Morocco, introduced a series of extraordinary muqarnas vaults in painted plaster over the bays leading up to the mihrab, or niche indicating the direction of prayer. This prime location shows the high prestige this type of decoration carried. At almost the same time, a muqarnas vault was crafted in the 1140’s over the nave of the Cappella Palatina

in Palermo, Sicily. This was the royal chapel of the Christian Norman King Roger II, monarch of a realm recently conquered from Muslims and inhabited by a mixed population, and the ceiling is a rare example of muqarnas in Christian architecture. Its tiers of wooden muqarnas are painted with a variety of figural and non-figural ornament organized around two rows of eight-pointed stars. The western muqarnas tradition culminated in Granada, Spain, with two spectacular plaster vaults added to the Alhambra palace in the mid-14th century: the star-shaped vault over the Hall of the Abencerrajes, and the celestial octagonal muqarnas vault over the Hall of the Two Sisters. Muqarnas vaults also appear in the contemporary Alcázar of Seville, as remodeled by Pedro, king of Castile and Leon, another Christian patron who appreciated the form.

To the east, Seljuq sultans introduced muqarnas to Anatolia (modern Turkey) from neighboring lands, where portals were crowned with muqarnas hoods, and minarets were built with muqarnas supporting the balconies between stories. Under the Ilkhans and Timurids in the 14th and 15th centuries, builders systematized the muqarnas by creating drawings showing how the individual elements were to be combined. Under the Ottomans (1281 – 1924), muqarnas

continued to be used, largely in stone, until the 18th century. In Jam, Afghanistan, builders in 1194 CE used muqarnas to support the balconies of the exquisite brick minaret there. Ghurid builders introduced muqarnas to northern India when they conquered the region in the late 12th century. As a result, the minaret of the Quwwat al-Islam mosque in Delhi, built between 1199 and 1220 CE, uses tiers of muqarnas to support its balconies.

Non-Muslims continued to occasionally incorporate muqarnas decoration, too, in buildings ranging from palaces in Constantinople (now Istanbul), Palermo and Seville to churches in Armenia and 19th-century Orientalist architecture in Europe and the Americas. Contemporary international architects have experimented with new forms and interpretations including I.M. Pei in the Museum of Islamic Art, in Doha, Qatar, and Angelo Candalepas in the mosque in Punchbowl, Australia.

Scholars have long debated whether muqarnas carried symbolic meaning. The form’s range over continents, cultures and centuries makes such interpretation risky, but for an architectural allegory of the celestial vault—the infinity of the heavens—one could hardly find a technique more inspiring to the imagination. 🌐

In stone, wood and plaster, muqarnas was popular from the Atlantic to the Indian oceans.

SHEILA BLAIR and **JONATHAN BLOOM** recently retired from careers teaching, writing, editing and publishing about many aspects of Islamic art and architecture. (sheila.blair@bc.edu, jonathan.bloom@bc.edu)

ON THE COVER The Corral del Carbón in Granada, Spain, is the only *funduq* (hostelry) that survives from Muslim times in the former capital of the Nasrid kingdom. Its vaulted, muqarnas entrance portal is the most elegant part of the otherwise utilitarian, early-14th-century structure. The plaster vault retains some of its original paint, and it displays the same high quality of workmanship found in the nearby Alhambra palace.

PHOTO BY EFESENKO / ALAMY



AramcoWorld

Publisher: ARAMCO AMERICAS

Editor: RICHARD DOUGHTY | Managing Editor: JENNIFER MATHLOUTHI | Assistant Editor: ALVA ROBINSON | Digital Media Editor: JOHNNY HANSON | Design: GRAPHIC ENGINE DESIGN | Printing: RR DONNELLEY / WETMORE



PATTERNS of MOON

PATTERNS of SUN

Written by **PAUL LUNDE**

THE HIJRI CALENDAR

In 638 CE, six years after the death of the Prophet Muhammad, Islam's second caliph, 'Umar, recognized the necessity of a calendar to govern the affairs of Muslims. This was first of all a practical matter. Correspondence with military and civilian officials in the newly conquered lands required dating. Pre-Islamic Arab customs identified years after the occurrence of major events. But Persia used a different calendar from Syria, where the caliphate was later based; Egypt used yet another. Each of these calendars had a different starting point, or epoch. The Sasanids, the ruling dynasty of Persia, used the date of the accession of the last Sasanid monarch, Yazdagird III, June 16, 632 CE. Syria, which until the Muslim conquest was part of the Byzantine Empire, used a form of the Roman "Julian" calendar, with an epoch of October 1, 312 BCE. Egypt used the Coptic calendar, with an epoch of August 29, 284 CE. Although all were solar calendars, and hence geared to the seasons and containing 365 days, each also had a different system for periodically adding days to compensate for the fact that the true length of the solar year is not 365 but 365.2422 days.

In pre-Islamic Arabia various other systems of measuring time had been used. In South Arabia some calendars apparently were lunar, while others were

lunisolar, using months based on the phases of the moon but intercalating days outside the lunar cycle to synchronize the calendar with the seasons. On the eve of Islam, the Himyarites appear to have used a calendar based on the Julian form, but with an epoch of 110 BCE. In central Arabia the course of the year was charted by the position of the stars relative to the horizon at sunset or sunrise, dividing the ecliptic into 28 equal parts corresponding to the location of the moon on each successive night of the month. The

names of the months in that calendar have continued in the Islamic calendar to this day and would seem to indicate that before Islam some sort of lunisolar calendar was in use, though it is not known to have had an epoch other than memorable local events.

There were two other reasons 'Umar rejected existing solar calendars. The Qur'an, in Chapter 10, Verse 5, states that time should be reckoned by the moon. Not

only that, calendars used by the Persians, Syrians and Egyptians were identified with other religions and cultures. He therefore decided to create a calendar specifically for the Muslim community. It would be lunar, and it would have 12 months, each with 29 or 30 days.

This gives the lunar year 354 days, 11 days fewer than the solar year. 'Umar chose as the epoch for

the new Muslim calendar the *Hijra*, the emigration of the Prophet Muhammad and 70 Muslims from Makkah to Madinah, where Muslims first attained religious and political autonomy. Hijra thus occurred on 1 Muharram of the year 1 according to the Islamic calendar, which begins the *hijri* era. (This date corresponds to July 16, 622 CE, on the Gregorian calendar.) Today in the West, it is customary, when writing hijri dates, to use the abbreviation AH, which stands for the Latin *anno hegirae*, "year of the Hijra."

Because the Islamic lunar calendar is 11 days shorter than the solar, it is therefore not synchronized to the seasons. Its festivals, which fall on the same days of the same lunar months each year, make the round of the seasons every 33 solar years. This 11-day difference between the lunar and the solar year accounts for the difficulty of converting dates from one system to the other.

THE GREGORIAN CALENDAR

The early calendar of the Roman Empire was lunisolar, containing 355 days divided into 12 months beginning on January 1. To keep it more or less in accord with the actual solar year, a month was added every two years. The system for doing so was complex, and cumulative errors gradually misaligned it with the seasons. By 46 BCE, it was some three months out of alignment, and Julius Caesar oversaw

its reform. Consulting Greek astronomers in Alexandria, he created a solar calendar that added one day to February every fourth year, effectively compensating for the solar year's length of 365.2422 days. This Julian calendar was used throughout Europe until 1582 CE.

In the Middle Ages, the Christian liturgical calendar was grafted onto the Julian one, and the computation of lunar festivals like Easter, which falls on the first Sunday after the first full moon after the spring equinox, challenged some of the best minds in Christendom. The use of the epoch 1 CE dates from the sixth century CE, but did not become common until the 10th.

The Julian year was nonetheless 11 minutes and 14 seconds too long. By the early 16th century, due to the accumulated error, the spring equinox had begun falling on March 11 rather than where it should, on March 21. Copernicus, Christophorus Clavius and the physician Aloysius Lilius provided the calculations, and in 1582 Pope Gregory XIII ordered that Thursday, October 4, 1582, would be followed by Friday, October 15, 1582. Most Christianized kingdoms accepted the new "Gregorian" calendar, but it was not adopted in England and the Americas until the 18th century. Its use today is common worldwide. The Gregorian year is nonetheless 25.96 seconds ahead of the solar year, which by the year 4909 will add up to an extra day. 🌐

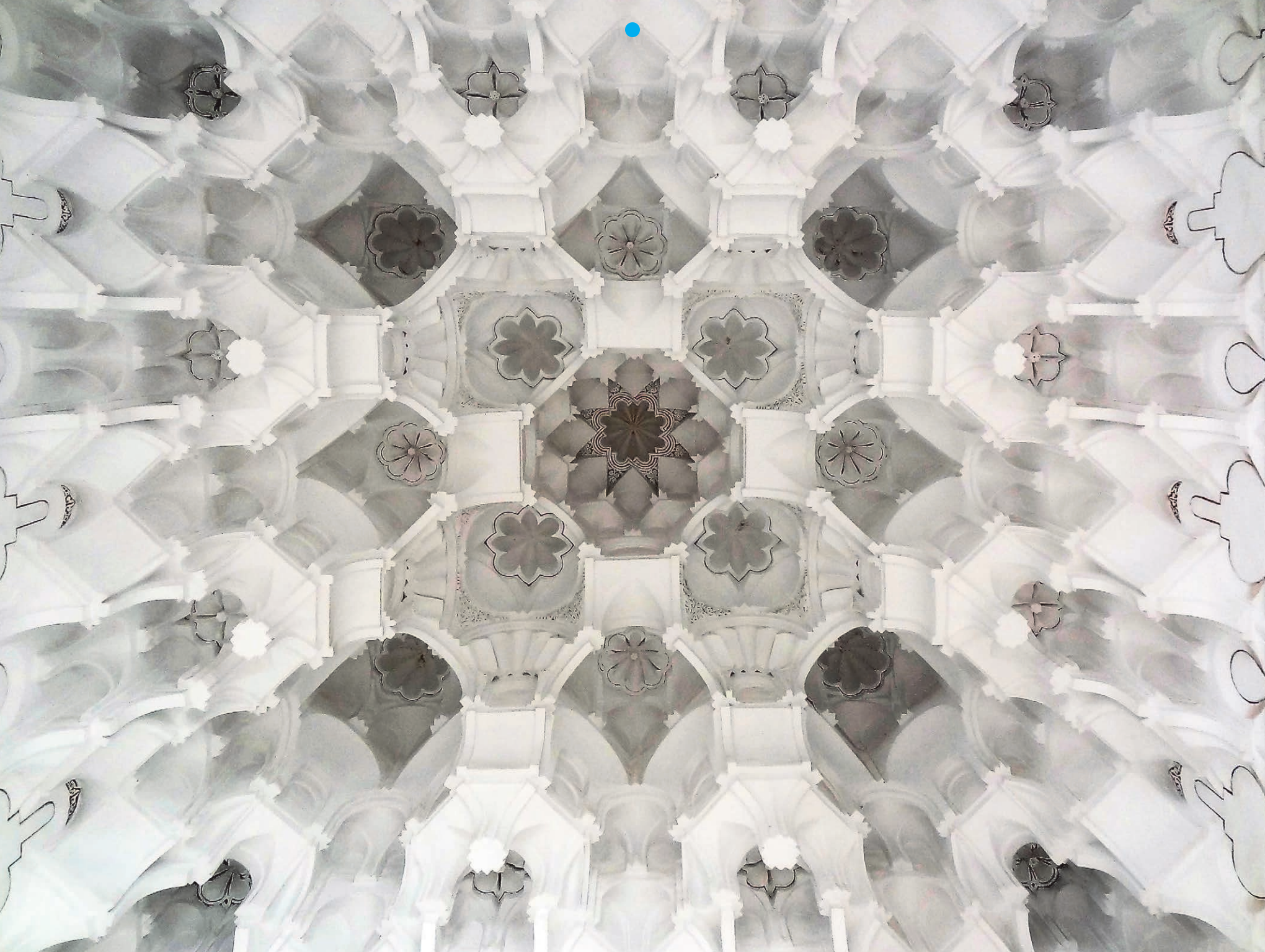
The late **PAUL LUNDE** was a senior research associate with the Civilizations in Contact Project at Cambridge University and author of more than 70 articles for *AramcoWorld*.

CONVERTING YEARS AND DATES

Online calculators can be found by searching "Gregorian-hijri calendar calculator" or similar terms. The following equations show how the conversion is made mathematically. However, keep in mind that in each case, the result is only the year in which the other calendar's year begins. For example, 2022 Gregorian begins in 1443 hijri and ends in 1444; correspondingly, 1444 hijri begins in 2022 Gregorian and ends in 2023.

$$\text{GREGORIAN YEAR TO HIJRI YEAR} = [(32 \times \text{Hijri year}) \div 33] + 622$$

$$\text{HIJRI YEAR TO GREGORIAN YEAR} = [(\text{Gregorian year} - 622) \times 33] \div 32$$



JANUARY

Jumada I – Jumada II

FEZ, MOROCCO: QARAWIYYIN MOSQUE This mosque, founded in the ninth century CE, was repeatedly enlarged and restored, most notably under the Almoravid ruler 'Ali ibn Yusuf between 1134 and 1143 CE. He ordered a series of splendid plaster muqarnas vaults for the main part of the mosque, but this one covers a funerary chapel behind the mosque's mihrab, where prayers could be said over the bodies of the deceased without bringing them into the mosque itself. PHOTO BY XAVIER SALMON

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY							
NOTES:				DECEMBER 2021 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31		FEBRUARY 2022 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28							
2	29	3	30	4	1	5	2	6	3	7	4	8	5
NASA scientist Farouk El-Baz born 1938				Carsten Niebuhr's Danish Expedition to Arabia 1761				Author, poet and artist Kahlil Gibran born 1883				'Abd al-'Aziz Al-Sa'ud declared King of Hijaz 1926	
9	6	10	7	11	8	12	9	13	10	14	11	15	12
		Uzbek poet and writer Oybek born 1905								Muslim weekly <i>The Crescent</i> publishes in Liverpool 1893			
16	13	17	14	18	15	19	16	20	17	21	18	22	19
Abd al-Rahman III becomes caliph of al-Andalus 929 CE				Winter Palace hotel in Luxor, Egypt, opens 1907								Ausma Zehanat Khan publishes debut novel 2015	
23	20	24	21	25	22	26	23	27	24	28	25	29	26
30	27	31	28	Kyrgyzstan national playwright Mirzabek Toybaev born 1935						C. R. Ali coins country name "Pakistan" 1933			





FEBRUARY

Jumada II – Rajab

BUKHARA, UZBEKISTAN: ABDUL AZIZ KHAN MADRASA In 1651-52 the Shaybanid ruler 'Abd al-'Aziz Khan constructed the largest madrasa (theological college) on Bukhara's Registan square opposite the 15th-century madrasa built by the Timurid prince Ulughbeg. The brightly painted muqarnas semidome at the top of the arched iwan has been restored to reflect the glitter of the original decoration. PHOTO BY JAKOB FISCHER / ALAMY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>JANUARY 2022</p> <p>1</p> <p>2 3 4 5 6 7 8</p> <p>9 10 11 12 13 14 15</p> <p>16 17 18 19 20 21 22</p> <p>23 24 25 26 27 28 29</p> <p>30 31</p>		<p>1 29</p> <p>Mughal Empire enters its classical age 1556</p>	<p>2 1</p>	<p>3 2</p>	<p>4 3</p> <p>Phoenician replica ship sails the Atlantic 2020</p>	<p>5 4</p>
<p>6 5</p> <p>Abdul Wahhab-Um Kulthum collaboration "Ina Umri" premieres 1964</p>	<p>7 6</p>	<p>8 7</p>	<p>9 8</p> <p>Poet Ali-Shir Nava'i born 1441 CE</p>	<p>10 9</p> <p>Hadji Ali arrives Texas as camel handler for the US Army 1856</p>	<p>11 10</p>	<p>12 11</p> <p>Malian band Tinariwen wins Grammy 2012</p>
<p>13 12</p>	<p>14 13</p> <p>Saudi King 'Abd al-'Aziz Al-Sa'ud meets US President Roosevelt 1945</p>	<p>15 14</p>	<p>16 15</p>	<p>17 16</p>	<p>18 17</p> <p>First flight over the Sahara 1920</p>	<p>19 18</p>
<p>20 19</p>	<p>21 20</p>	<p>22 21</p> <p>Istiqlal Mosque opens in Jakarta, Indonesia 1978</p>	<p>23 22</p>	<p>24 23</p> <p>Traveler Ibn Battuta born in Tangier 1304 CE</p>	<p>25 24</p>	<p>26 25</p>
<p>27 26</p>	<p>28 27</p> <p>Bassam Tariq's film <i>Mogul Mowgli</i> wins Berlin FIRPRESCI 2020</p>	<p>MARCH 2022</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28 29 30 31</p>	<p>NOTES:</p> <hr/> <hr/> <hr/>			





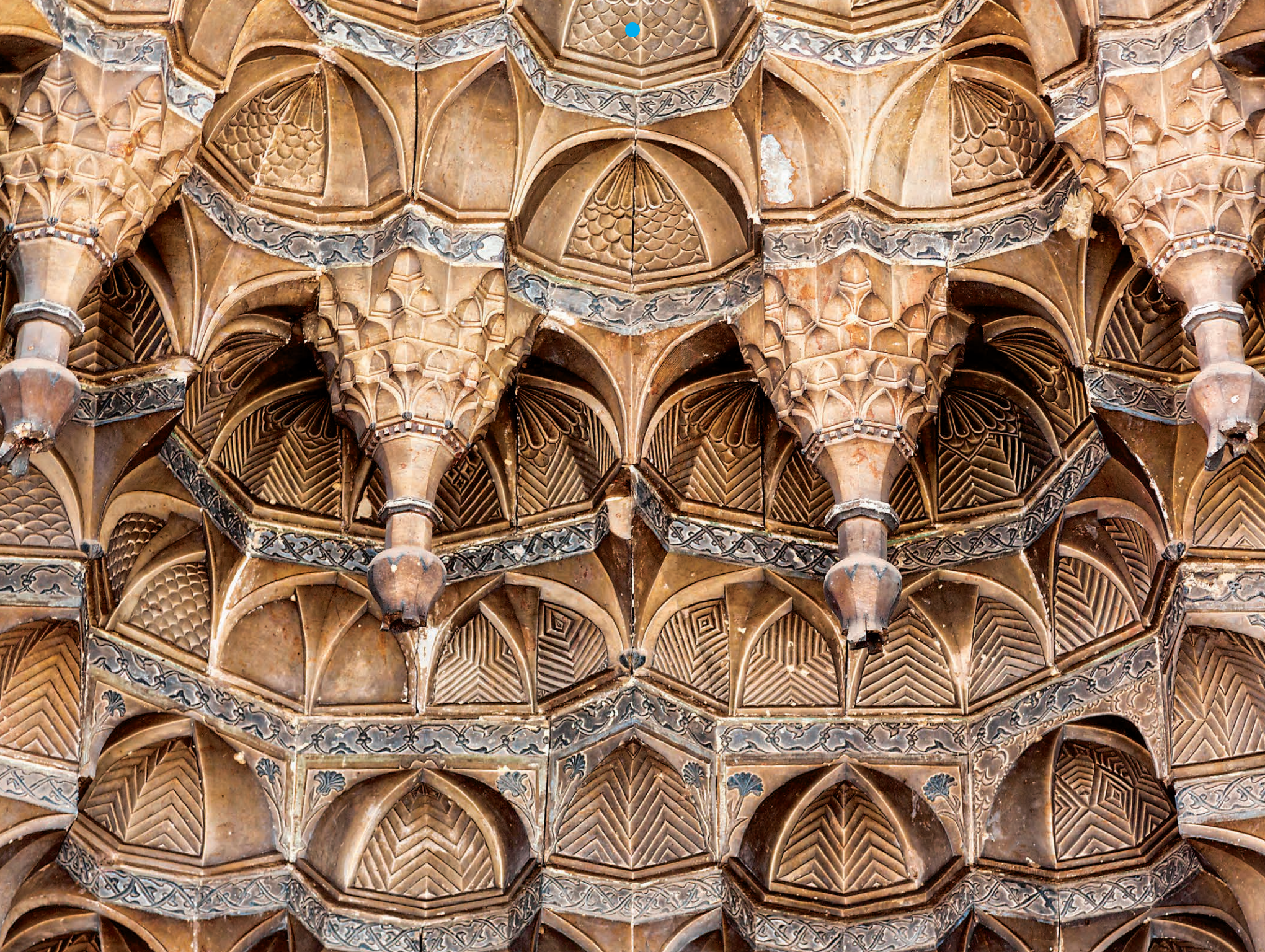
MARCH

Rajab – Sha`aban

PALERMO, SICILY: CAPPELLA PALATINA In 1132 Roger II, Norman king of Sicily, began building an audience hall and chapel for his palace in Palermo. A painted wooden muqarnas vault, similar to the contemporary plaster vaults in Fez, covered its nave. Decorated with an astounding variety of images of people and animals as well as Arabic inscriptions offering good wishes, the ceiling demonstrates how Christian patrons also appreciated the wonders of muqarnas. PHOTO BY IMAGEBROKER / ALAMY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>FEBRUARY 2022</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28</p>		<p>1 28</p> <p>Uzbekistan writer and historian Muhammad Ali born 1942</p>	<p>2 29</p>	<p>3 30</p>	<p>4 1</p> <p>Electronic music pioneer Halim El-Dabh born 1921</p>	<p>5 2</p> <p>Traveler Nasir Khusraw begins seven-year journey 1046 CE</p>
<p>6 3</p> <p>Abu Dhabi and France agree to establish Louvre Abu Dhabi 2007</p>	<p>7 4</p>	<p>8 5</p>	<p>9 6</p> <p>Lebanon creates Horsh Eden as a protected area 1992</p>	<p>10 7</p>	<p>11 8</p> <p>Facebook launches Arabic version 2009</p>	<p>12 9</p>
<p>13 10</p>	<p>14 11</p> <p>Cairo Congress of Arab Music convenes 1932</p>	<p>15 12</p>	<p>16 13</p>	<p>17 14</p> <p>Abbasid Caliph Harun al-Rashid born 763 CE</p>	<p>18 15</p>	<p>19 16</p> <p>Explorer and translator Richard Francis Burton born 1821</p>
<p>20 17</p>	<p>21 18</p>	<p>22 19</p> <p>Alina Zagitova becomes first Muslim to win Olympic gold, world title, Grand Slam 2018</p>	<p>23 20</p>	<p>24 21</p>	<p>25 22</p> <p>Ottoman explorer Evliya Çelebi born 1611</p>	<p>26 23</p>
<p>27 24</p>	<p>28 25</p>	<p>29 26</p>	<p>30 27</p> <p>Philosopher Maimonides born in Córdoba 1138 CE</p>	<p>31 28</p>		<p>APRIL 2022</p> <p>1 2</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>24 25 26 27 28 29 30</p>





APRIL

Sha`aban – Ramadan

DIYARBAKIR, TURKEY: BAHRAM PASHA MOSQUE Commissioned by Ottoman provincial governor Bahram Pasha, this mosque was completed in 1572–73 according to designs by Sinan, the chief architect to the Ottoman sultans renowned for his mosques in Istanbul and Edirne. The hanging stone pendants over the elaborate portal, themselves decorated with miniature muqarnas, appear to defy gravity.

PHOTO BY B. O'KANE / ALAMY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY																																																																									
NOTES:			<p>MARCH 2022</p> <table border="1"> <tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td></tr> <tr><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td></tr> <tr><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td></tr> <tr><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td></tr> <tr><td>30</td><td>31</td><td></td><td></td><td></td><td></td></tr> </table>		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					<p>MAY 2022</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr> <tr><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td></tr> <tr><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td></tr> <tr><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr> <tr><td>29</td><td>30</td><td>31</td><td></td><td></td><td></td><td></td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					1	29	2	1
	1	2	3	4	5																																																																										
6	7	8	9	10	11																																																																										
12	13	14	15	16	17																																																																										
18	19	20	21	22	23																																																																										
24	25	26	27	28	29																																																																										
30	31																																																																														
1	2	3	4	5	6	7																																																																									
8	9	10	11	12	13	14																																																																									
15	16	17	18	19	20	21																																																																									
22	23	24	25	26	27	28																																																																									
29	30	31																																																																													
3	2	4	3	5	4	6	5	7	6	8	7	9	8																																																																		
		Arabian Nights translator Antoine Galland born 1646		First Arabic professor at Yale, E. E. Salisbury, born 1814								Heinrich Schliemann begins to dig for Troy 1870																																																																			
10	9	11	10	12	11	13	12	14	13	15	14	16	15																																																																		
				Woking Mosque Trust gains ownership of historic sites 2015						Kawkab America, North America's first newspaper in Arabic, launches 1892																																																																					
17	16	18	17	19	18	20	19	21	20	22	21	23	22																																																																		
Easter		First Quarzazate International Film Festival, Morocco 2016				London Times praises Ottoman Sultan's aid to Ireland 1847						Kareem Abdul-Jabar plays his last LA Lakers game 1989																																																																			
24	23	25	24	26	25	27	26	28	27	29	28	30	29																																																																		
Mamluks admitted to French Imperial Guard 1815				Dimash Kudaibergen is "Most Popular Asian Singer" 2017								Babur begins reign as first Mughul ruler 1526																																																																			





MAY

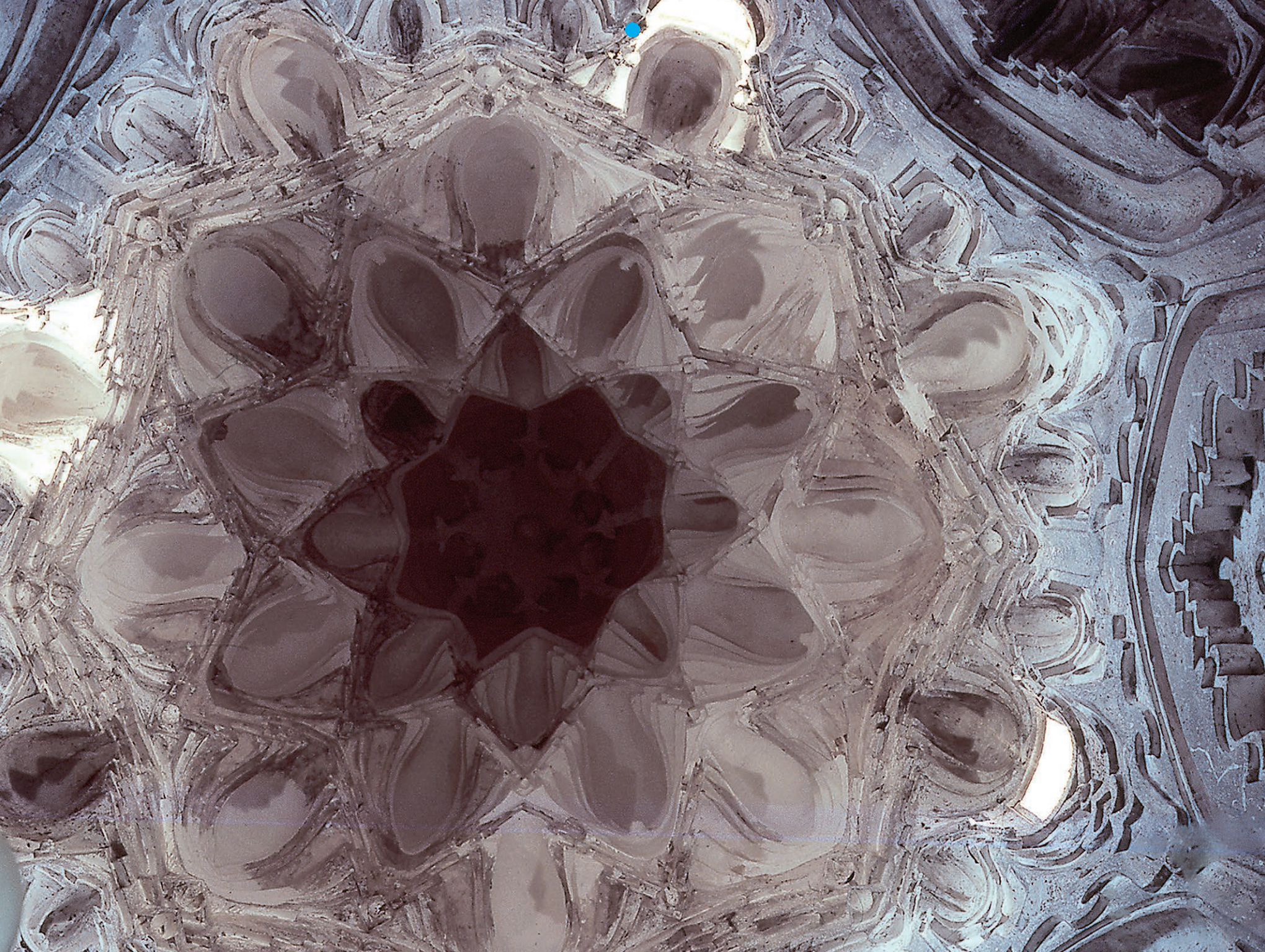
Ramadan – Shawwal – Dhu-al-Qa`dah

CAIRO, EGYPT: SULTAN HASAN MOSQUE The funerary complex of Sultan Hasan (r. 1356-61 CE) is the largest and most elaborate of those built in Cairo by the Mamluk sultans. The magnificent entrance vestibule is covered by a bicolored stone dome pierced by eight small windows that rests on a ring of stone muqarnas, itself supported by muqarnas pendentives and flanked by muqarnas semidomes.

PHOTO BY EFESENKO / ALAMY

SUNDAY		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
1	30	2	1	3	2	4	3	5	4	6	5	7	6
Eid al-Fitr						India establishes Sundarban National Park 1984				Pope John Paul II visits Damascus Mosque 2001			
8	7	9	8	10	9	11	10	12	11	13	12	14	13
		Author Gamal al-Ghitani born 1945						Abbasid envoy Ibn Fadlan arrives Volga region 922 CE					
15	14	16	15	17	16	18	17	19	18	20	19	21	20
				Scholar of Bedouin poetry Marcel Kurpershoek born 1949						Vasco da Gama's ships reach India from Europe 1498			
22	21	23	22	24	23	25	24	26	25	27	26	28	27
						Nur Jahan becomes empress consort of Mughal empire 1611						Kamancheh player Habil Aliyev born 1927	
29	28	30	29	31	1	APRIL 2022 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		JUNE 2022 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		NOTES: _____ _____ _____			
				Architect Zaha Hadid becomes first woman to win Pritzker Prize 2004									





JUNE

Dhu-al-Qa`dah – Dhu-al-Hijjah

NEAR SAMARRA, IRAQ: IMAM DUR This muqarnas dome was built in the second half of the 11th century by the local 'Uqaylid ruler Sharaf al-Dawla Muslim ibn Quraysh, who died in 1085. Although originally attached to a mosque and courtyard, the domed structure was all that survived into modern times, when it was first photographed and studied as one of the earliest examples—and possibly the earliest example—of a freestanding muqarnas dome. In 2014 it was destroyed by ISIS. PHOTO COURTESY YASSER TABBAÄ ARCHIVE / AGA KHAN DOCUMENTATION CENTER / MIT LIBRARIES

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
NOTES: _____ _____ _____		<p>MAY 2022</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	1	2	3	4
5	6	7	8	9	10	11
Egypt reveals discovery of "Headless Pyramid" at Saqqara 2008			Abu Bakr, first caliph of Islam, begins reign 632	Bangladeshi photojournalist Shahidul Alam born 1955	Manaschi and folk singer Togolok Moldo born 1860	
12	13	14	15	16	17	18
	Süleymaniye Mosque cornerstone laid 1550		Football star Mohamed "Mo" Salah born 1992			
19	20	21	22	23	24	25
World Congress of Tatars convenes 1992		Citadel of Erbil recognized on World Heritage List 2014			Al-Azhar University opens in Cairo 972 CE	
26	27	28	29	30	1	
	Singer and actor Nasri Shamseddine born 1927		Mathematician Sir Ashutosh Mukherjee born 1864			
						<p>JULY 2022</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>





JULY

Dhu-al-Hijjah – Muharram 1444

DELHI, INDIA: QUTB MINAR Begun in 1199 CE and rising 72 meters over the Quwwat al-Islam mosque, the Qutb Minar was built by Delhi's first Muslim rulers. They modeled this minaret on earlier examples built of brick in Afghanistan, here translated into the local red sandstone. The exquisitely detailed muqarnas supporting the first of the minaret's four balconies combines a traditional Islamic form with Indian styles of masonry.

PHOTO BY SHEILA BLAIR AND JONATHAN BLOOM

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY																																																																									
NOTES:			<p>JUNE 2022</p> <table border="1"> <tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td></tr> <tr><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td></tr> <tr><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td></tr> <tr><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td></tr> <tr><td>30</td><td></td><td></td><td></td><td></td></tr> </table>		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					<p>AUGUST 2022</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr> <tr><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td></tr> <tr><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td></tr> <tr><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						1	2	2	3
	1	2	3	4																																																																											
5	6	7	8	9																																																																											
10	11	12	13	14																																																																											
15	16	17	18	19																																																																											
20	21	22	23	24																																																																											
25	26	27	28	29																																																																											
30																																																																															
1	2	3	4	5	6																																																																										
7	8	9	10	11	12																																																																										
13	14	15	16	17	18																																																																										
19	20	21	22	23	24																																																																										
25	26	27	28	29	30																																																																										
31																																																																															
					Optics pioneer Ibn al-Haytham born 965 CE																																																																										
3	4	4	5	5	6	6	7	7	8	8	9	9	10																																																																		
		First London Shubbak Festival kicks off 2011				First Jameel Prize awarded 2009						Eid al-Adha																																																																			
10	11	11	12	12	13	13	14	14	15	15	16	16	17																																																																		
				Almohad leader Abd Al-Mu'min enters Tunis 1159						Spanish Inquisition disbanded 1834																																																																					
17	18	18	19	19	20	20	21	21	22	22	23	23	24																																																																		
Chingiz Aitmatov and Kurt Vonnegut meet 1975						Harun al-Rashid gifts elephant to Charlemagne 802 CE						King Mohammed VI of Morocco coronated 1999																																																																			
24	25	25	26	26	27	27	28	28	29	29	30	30	1																																																																		
31		Philosopher Ibn al-'Arabi born in Seville 1165 CE						First Marrakech International Film Festival 2001																																																																							





AUGUST

Muharram 1444 – Safar

TRIPOLI, LEBANON: AMIR TAYNAL MOSQUE Built by the Mamluk governor of Tripoli in 1336 CE, this large and elegant mosque attracted attention for its lavish decoration and unusual architecture. This gateway between the two main areas is constructed using *ablaq*, or alternating courses of fine black and white masonry that here also includes brown.

PHOTO BY DICK DOUGHTY / ARAMCOWORLD

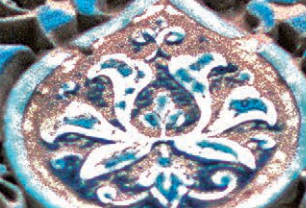
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>JULY 2022</p> <p>1 2</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>24 25 26 27 28 29 30</p> <p>31</p>	<p>1 3</p> <p>Dame Nemat Shafik assumes office as Deputy Governor of the Bank of England 2014</p>	<p>2 4</p> <p>Zain Bhikha, pioneer performer of al-Nashid songs, born 1974</p>	<p>3 5</p> <p>Lunar crater named for Ibn Firmas 1976</p>	<p>4 6</p> <p>Salif Keita, "Golden Voice of Africa," born 1949</p>	<p>5 7</p> <p>UK's Mo Farrah wins four Olympic gold medals 2016</p>	<p>6 8</p> <p>Arab American publisher Najeeb Diab born 1870</p>
<p>7 9</p> <p>Poet-theologian Jami born 1414 CE</p>	<p>8 10</p>	<p>9 11</p>	<p>10 12</p>	<p>11 13</p>	<p>12 14</p>	<p>13 15</p>
<p>14 16</p>	<p>15 17</p>	<p>16 18</p>	<p>17 19</p>	<p>18 20</p>	<p>19 21</p>	<p>20 22</p>
<p>21 23</p>	<p>22 24</p> <p>American entrepreneur Yarrow Mamout manumitted 1796</p>	<p>23 25</p>	<p>24 26</p>	<p>25 27</p>	<p>26 28</p>	<p>27 29</p>
<p>28 1</p> <p>Sitar virtuoso Vilayet Khan born 1928</p>	<p>29 2</p>	<p>30 3</p>	<p>31 4</p>	<p>SEPTEMBER 2022</p> <p>1 2 3</p> <p>4 5 6 7 8 9 10</p> <p>11 12 13 14 15 16 17</p> <p>18 19 20 21 22 23 24</p> <p>25 26 27 28 29 30</p>	<p>NOTES:</p> <hr/> <hr/> <hr/>	





عَلَّمَ
رَبِّهِ
الْحَقِّ

عَلَّمَ
رَبِّهِ
الْحَقِّ



SEPTEMBER

Safar – Rabi` I

SAMARKAND, UZBEKISTAN: SHAH-I-ZINDA Built in the 1370s CE in honor of Seljuk ruler Amir Timur’s niece, this small structure is decorated with an astonishing variety of brilliantly glazed tiles, both flat and three-dimensional, in both dark and light blue and white. Unusually, two inscriptions name the builders. Another, below the muqarnas, declares: “This ceiling, full of muqarnas, and this gilded vault remind one that every design and every craft you see in this world is by the grace of the Creator.”

PHOTO BY SHEILA BLAIR AND JONATHAN BLOOM

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
NOTES:			AUGUST 2022 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 5 Geographer and traveler Ibn Jubayr born 1145 CE	2 6 Prophet Muhammad begins Hijra 622 CE	3 7 10269 Tusi, a minor planet, discovered 1979
4 8	5 9	6 10	7 11	8 12	9 13	10 14
Al-Biruni, “Father of Geodesy,” born 973 CE			Abdul Ahad Mohmand returns from Mir space station 1988			
11 15	12 16	13 17	14 18	15 19	16 20	17 21
	Ibn Battuta reaches the Indus River 1333 CE			House of Wisdom patron Caliph al-Ma’mun born 786 CE		
18 22	19 23	20 24	21 25	22 26	23 27	24 28
Algerian rock-rai star Rachid Taha born 1958		Launch of Djerbahood Project in Er-Riadh, Tunisia 2014				
25 29	26 30	27 1	28 2	29 3	30 4	OCTOBER 2022 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
	Coridon of Ceylon becomes first Muslim to own property in Cape Town 1794		Salamat Sadykova, “The Voice of Kyrgyzstan,” born 1956		Sepak takraw medal sport debut at Asian Games 1990	





OCTOBER

Rabi` I – Rabi` II

TELOUET, MOROCCO: KASBAH Built from 1860 on, the kasbah was the fortress of the powerful Glaoui clan, located at a strategic point on the route from Marrakesh that crossed the High Atlas mountains to the Saharan trade gateway town of Ouarzazate. The patron brought craftsmen from all over Morocco to this remote location to work on the decoration of his palace. PHOTO BY EDUARDO BLANCO / ALAMY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY									
NOTES:				SEPTEMBER 2022 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		NOVEMBER 2022 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									
2	6	3	7	4	8	5	9	6	10	7	11	8	12	1	5
World's largest falcon hospital opens in Abu Dhabi 1999		Lebanon creates Karm Chbat as a protected area 1995		Royal Opera House Muscat opens 2011		Hulagu, founder of Ilkhanate, born 1218 CE									
9	13	10	14	11	15	12	16	13	17	14	18	15	19		
Writer and dramatist Tawfiq al-Hakim born 1898		Filmmaker Emily Jacir wins Leone d'Oro 2007		Issyk Kul Forum addresses world issues 1986		Rimsky-Korsakov's "Scheherazade" premieres 1888									
16	20	17	21	18	22	19	23	20	24	21	25	22	26		
23	27	24	28	25	29	26	1	27	2	28	3	29	4		
30	5	31	6												





NOVEMBER

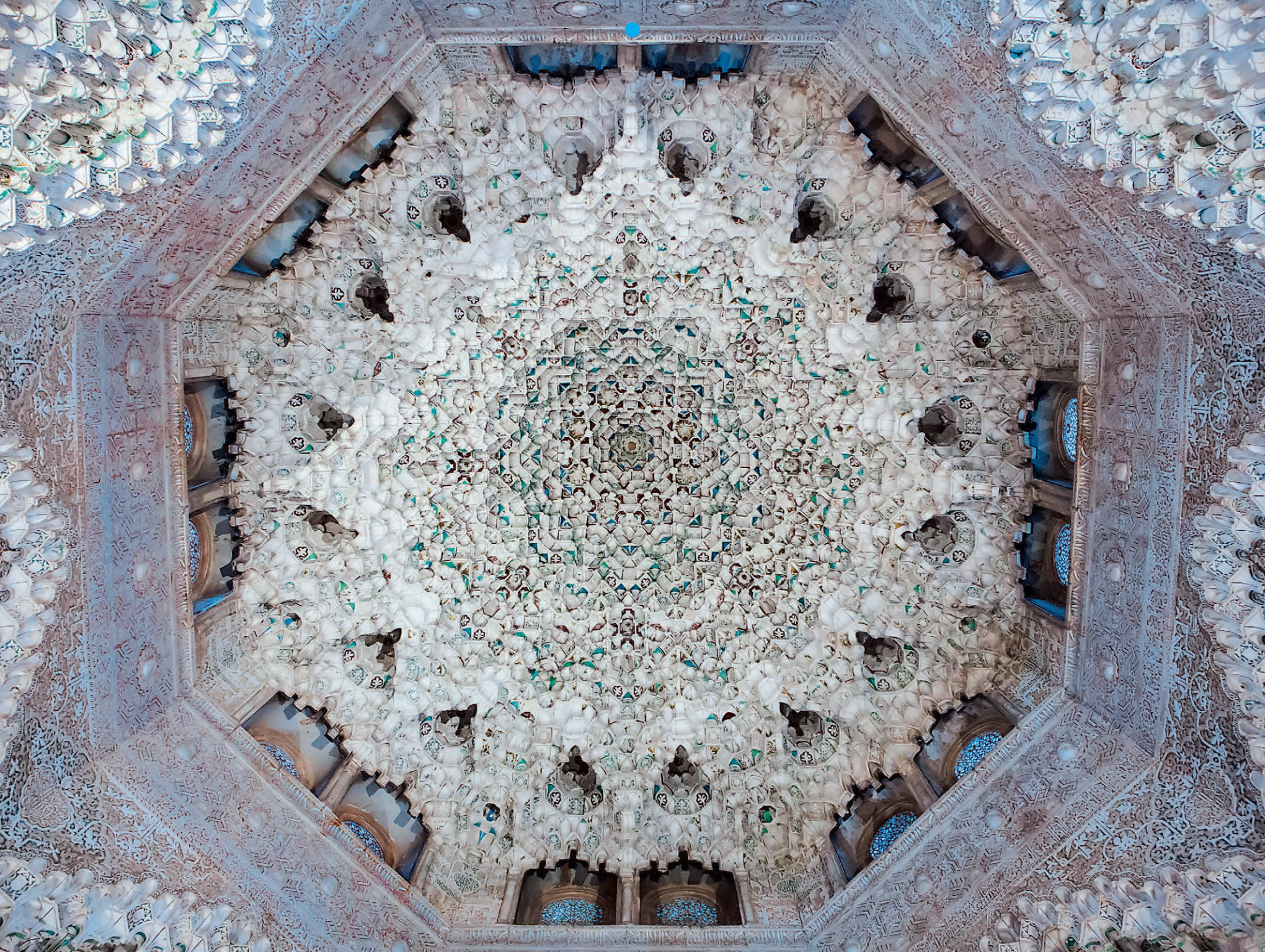
Rabi` II – Jumada I

SAMARKAND, UZBEKISTAN: GUR-I-MIR Built as a madrasa in the late 1300s CE, this complex became the burial site of Amir Timur and many of his male successors. The interior decoration is brilliant to the point of overwhelming, particularly the muqarnas, which was made of pressed and molded paper painted in blue and gold and fastened to the surfaces with small iron nails. Over time, the paper hung in shreds until recent restoration.

PHOTO BY STARFLECTOR / ALAMY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>OCTOBER 2022</p> <p>1</p> <p>2 3 4 5 6 7 8</p> <p>9 10 11 12 13 14 15</p> <p>16 17 18 19 20 21 22</p> <p>23 24 25 26 27 28 29</p> <p>30 31</p>		1 7	2 8	3 9	4 10	5 11
			Bollywood superstar Shah Rukh Khan born 1965			
6 12	7 13	8 14	9 15	10 16	11 17	12 18
Estabanico of Morocco becomes first African explorer in North America 1528				Radiyya bint Iltutmish begins reign as Sultan of Delhi 1236 CE		Morocco, Sudan and Tunisia join the United Nations 1956
13 19	14 20	15 21	16 22	17 23	18 24	19 25
	Malaysian singer-songwriter Yuna born 1986		Polymath and poet Ibn al-Khatib born in Fez 1313 CE		Palestinian photographer Karimeh Abbud born 1893	
20 26	21 27	22 28	23 29	24 30	25 1	26 2
		Haidar Taleb Erabeh sets out across UAE on solar-powered wheelchair 2010				Carter and Carnarvon open King Tut's tomb 1922
27 3	28 4	29 5	30 6			
	Ottoman Grand Vizier Rustem Pasha takes office 1544			<p>DECEMBER 2022</p> <p>1 2 3</p> <p>4 5 6 7 8 9 10</p> <p>11 12 13 14 15 16 17</p> <p>18 19 20 21 22 23 24</p> <p>25 26 27 28 29 30 31</p>		
					NOTES:	





DECEMBER

Jumada I – Jumada II

GRANADA, SPAIN: ALHAMBRA, HALL OF THE TWO SISTERS This octagonal muqarnas ceiling contains 5,416 plaster elements, many of which bear traces of their original paint, gold and silver decoration. A poem in Arabic by the 14th-century Nasrid court poet Ibn Zamrak inscribed on the walls below translates: "In the cupola such splendor does the chamber acquire that the palace competes with the very firmament."

PHOTO BY AZOOR TRAVEL PHOTO / ALAMY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
NOTES:		NOVEMBER 2022 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	JANUARY 2023 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 7	2 8	3 9
4 10	5 11	6 12	7 13	8 14	9 15	10 16
	Turkologist Fuat Köprülü born 1890			Poet Nasir Kazmi born 1925		Lawrence of Arabia film released 1962
11 17	12 18	13 19	14 20	15 21	16 22	17 23
Novelist Naguib Mahfouz born 1911		Singer Majida al-Rumi born 1956			Mohammedani Ibrahim photographs Lady Sennuwy statue excavation 1913	
18 24	19 25	20 26	21 27	22 28	23 29	24 30
	Hussein Kamel declared sultan of Egypt 1914		Writer and philosopher Oskon Danikeev born 1934			Verdi's Aida premieres in Cairo 1871
25 1	26 2	27 3	28 4	29 5	30 6	31 7
Christmas				Artist Zainul Abedin born 1914	All-India Muslim League founded 1906	



Discover with us

In November 1949 the Arabian American Oil Company (Aramco) published the first issue of an interoffice newsletter named *Aramco World*. Over the decades that followed, as the number of Americans working with Saudi colleagues in Dhahran grew into the tens of thousands, *Aramco World* grew into a bimonthly educational magazine whose historical, geographical and cultural articles helped those employees and their families appreciate new lands and cultures.

Today, you can experience *AramcoWorld* through digital and print media. Its mission remains education and the fostering of mutual appreciation among interconnected cultures. Online find our events calendar, book reviews, learning resources, video channel and more than 1,000 archived, indexed feature articles, from 1960 to now. All can be downloaded without charge, and selected photographs are also available royalty free at photoarchive.aramcoworld.com.



App



@aramcoworld



AramcoWorld



TRIPOLI, LEBANON: MADRASA AL-TUWASHIYYA

During restorations in 1999, workers paused outside the main entrance of the small religious school built in the late 15th century that is part of the city's rich architectural legacy from the Mamluk era. The door is topped with inscriptions from the Qur'an and a three-tier muqarnas that finishes in a half dome of a radiating zigzag pattern, a design that also appears in muqarnas built around the same time in Damascus, Cairo and Jerusalem. PHOTO BY DICK DOUGHTY / ARAMCOWORLD



SCAN ME

