**tabhane**

Turkish term for the hostel attached to a mosque where travellers (usually dervishes and mystics) could live free for three days. In early Ottoman mosques these formed separate chambers although they were later incorporated into the main body of the mosque.

**Taj Mahal**

*Major Islamic tomb complex built by the Mughal emperor at Agra in India.*

The Taj Mahal was begun by Shah Jahan in 1631 and took over twenty years to build. The tomb was built for Shah Jahan's wife Arjumand Banu Begam (also known as Mumtaz Mahal) who he married in 1612 before he was made emperor. She was the niece of Jahangir's wife Nur Jahan and granddaughter of his famous Persian minister Iltimad al-Daulah. Mumtaz Mahal was the emperor's favourite wife and during nineteen years of marriage she bore him fourteen children. Her death whilst accompanying him on a campaign in the Deccan caused the emperor great sorrow and inspired him to build the most beautiful tomb complex in the world.

Although unique in its size and beauty, the Taj Mahal forms part of a series of imperial Mughal tombs of which it is undoubtedly the greatest. The earliest Mughal tombs copied those of their Islamic predecessors the Lodi sultans of Delhi and were octagonal domed structures surrounded by arcades. Another popular tomb form in the early Mughal period was the square chamber-tomb as seen in the 'Barber's tomb' in Delhi. Later on in the Mughal period the two forms were combined to produce octagonal tombs with four sides shorter than the others, thus producing a square with the corners cut off. In the tomb of Humayun at Delhi four of these 'square' octagons were assembled around a central octagonal space which was then covered with a dome. The area between the octagons was bridged by iwans which formed the main access points to the central domed area. This is essentially the same design that was used in the Taj Mahal. In Humayun's tomb, however, the central area is surrounded on four sides by an arcade of pointed arches at ground level and is made of red sandstone with marble inlay, neither of which features are found in the Taj Mahal. Similarly the dome on the roof is lower set than in the Taj Mahal so that it does not produce a dominant upright form but rather a pyramidal one.

The Taj Mahal is located on a terrace on the banks of the Jumna river and can be seen from the emperor's palace in the Agra Fort. The building is part of a complex which included many buildings beside the central tomb and garden; to the south is a complex known as the 'chauch-i jilau khana', or ceremonial forecourt, which was flanked by four courtyards (two on each side) containing apartments for the tomb attendants; directly south of these is a further area divided into four caravanserais by two intersecting streets, and south of this are two more caravanserais and a bazar built around a square. A residential area grew up around this complex which was known as Mumtazabad. The revenue of this village together with that of thirty other villages in the vicinity was devoted to the upkeep of the building.

Like many other Mughal memorial tombs the Taj Mahal was incorporated into a formal garden of the Persian char bagh form where a square garden wall encloses a garden divided equally into four. In most tomb complexes the tomb forms the centre of the garden with the four parts arranged equally around it. In the case of the Taj Mahal, however, a square pool forms the centre of the garden whilst the tomb building was located at the far end of it, overlooking the river. The walls of the garden tomb complex are strengthened by six octagonal towers capped with domed chattris. The gate to the complex consists of a large rectangular structure with engaged corner turrets placed in the middle of a tall wall which effectively screens the
Taj Mahal from view until the visitor has passed through the gate. The effect of this is enhanced by the fact that the outer buildings of the complex and the gateway are built and faced in red sandstone whereas the tomb and minarets are faced in white marble.

The central part of the complex is raised on a rectangular podium decorated with arcades of blind niches. At each corner of the podium is an octagonal base for a minaret whilst the tomb stands in the centre. The gate is directly in line with the centre of the dome on the tomb, a symmetry which is emphasized by the minarets, two either side of the tomb. Each minaret is a tall (42 m), slightly tapering, cylindrical structure with two intermediate balconies and an open domed pavilion (chatri) on the top. Long pools divide the garden into four parts, one running east-west and the other running north-south from the gate to the Taj Mahal. At either end of the east-west axis are large triple-domed buildings with a central iwan. The building on the west side is a mosque whilst that to the east is known as the 'jawab', or echo, as it has no other function than to balance the view with the mosque on the other side. The north-south pools further emphasize the central axis of the gateway and dome.

The Taj Mahal has the same basic form as Humayun's tomb and consists of four octagons arranged around a central domed space. The façade of the tomb consists of a tall central iwan framed by a pishtaq which contains a frame of Quranic calligraphy flanked on each side by four smaller iwans, two on each storey. The iwans are all composed of four centre-pointed arches with pietra dura decoration in the spandrels. The corners of the building are cut off or chamfered with projecting pillars marking the change from one face to another. The central dome is flanked by four large domed chatris supported on piers between lobed arches. The domes on the chatris and the central dome represent a synthesis of Persian and Indian architecture where the bulbous form of the dome is derived from Persian Timurid architecture and the finial and its lotus base derive ultimately from Hindu temple architecture.
The central dome of the Taj Mahal is very tall (the finial is 73 m above ground level) and is raised up above the pishtaqs of the surrounding iwans by a tall circular drum about 15 m high. The dome is composed of two parts, an inner dome and an outer shell. The inner dome is approximately the same height as the iwans whilst the outer dome towers above. The use of an inner dome keeps the height of the inner space in proportion whilst the outer dome makes the height of the building correspond to its mass and with the minarets makes building stand out visually. Directly below the centre of the dome is the cenotaph of Mumtaz Mahal and next to it that of her husband Shah Jahan. The actual tombs, however, are in a vault or cave directly beneath the cenotaphs. The cenotaphs in the main chamber are surrounded by an octagonal pierced screen with two gates with pietra dura inlay on the posts. The walls of the interior are divided into blind arches alternating with arched doorways which give access to the four circular side chambers. Around each of the arches is a frame of Quranic inscriptions whilst the marble dadoes are also lavishly decorated with naturalistic depictions of flowers in low relief. The whole arrangement of the tomb, in particular the octagonal screen and the cave beneath, recalls the arrangement of the Dome of the Rock in Jerusalem. The reasons for this are probably coincidental and may simply reflect the fact that whilst octagonal mausoleums are rare in the Middle East they were common in India and there was no religious awareness of its significance.

As the finest example of Mughal funerary architecture it is not surprising that the design of the Taj Mahal was subsequently copied and developed in later tombs. The most obvious copy is the tomb of Rabi'a Daurani in Aurangabad built in 1660 which has the same arrangement of a central tomb on a podium with minarets at each corner. The Aurangabad tomb, however, is different because the central building is square instead of octagonal and the minarets are thicker and taller in proportion to the central structure. A more interesting version of this design is the tomb of Safdar Jang in Delhi built in 1753. This building is also square like the tomb at Aurangabad, but here the minarets are attached to the central structure instead of standing apart at the corners of the terrace. Instead of white marble the building is faced in red sandstone with white marble inlay.

See also: Mughals

Further reading:

talar

Iranian term for a hypostyle wooden hall which proceeds through the main part of a building.
taman

Indonesian term for a pleasure garden, usually associated with the royal palaces, or kraton. Taman gardens usually have a central tower, or artificial mountain, surrounded or approached by water, which in pre-Islamic tradition symbolizes mountain and sea.

See also: Java, kraton

Tanzania

Country in East Africa bordering on the Indian Ocean with a substantial Swahili-speaking Muslim population on the coast.

Tanzania forms part of the Islamic coast of East Africa which stretches from Somalia in the north to Mozambique in the south. Before 1970 the country was known as Tanganyika but following independence it united with Zanzibar to form the present state of Tanzania with its capital at Dar es Salaam. However, the two former countries retain autonomy and only the former territory of Tanganyika will be dealt with here (see separate entry for Zanzibar).

The earliest Islamic settlements in Tanzania can be traced back to at least the eighth century CE and appear to be related to the Indian Ocean dhow trade. The famous site of Kilwa on an island off the south coast contains traces of ninth-century Islamic structures, but unfortunately these are too fragmentary to reconstruct their form beyond establishing that they were built of mud over wooden frames. However, from the tenth-century levels of the site remains were found of an early stone mosque which, although not fully excavated, appears to conform to the same plan as early mosques elsewhere on the coast (e.g. the use of coursed coral blocks). Apart from archaeological sites the majority of Islamic monuments on the coast date from the period before 1200. The earliest standing monuments on the coast are the early mosque at Kaole and the mosque at Sanje ya Kati.

The ruins at Kaole consist of about fifteen tombs, two of which have pillars, and two mosques. The early mosque dates from the thirteenth century whilst the later one was probably built sometime in the sixteenth century. The early mosque has several unusual features not found later. It consists of a rectangular hall approximately 4 by 6 m north–south. Originally there was a set of masonry columns running down the centre of the structure which would have supported a flat roof. Access to the flat roof is by means of a staircase at the south end of the building. Either side of the central prayer hall were narrow side aisles (about 1 m wide) which were later enlarged. Architecturally the most interesting feature of the building is the mihrab. The mihrab arch consists of a plain border approximately 20 cm wide with a round arch containing a pointed niche at the apex. The panelled apse of the mihrab which projects out of the wall is probably a later fourteenth-century addition and it is likely that the original mihrab was set within the thickness of the wall. The mihrab arch is built out of roughly squared blocks covered with plaster to produce a smooth finish. This is an unusual technique which is not found in later mosques where the mihrab is usually made out of dressed coral blocks. The ablution area of the mosque is situated to the south of the prayer hall rather than to the east which became more usual later. The ablation area consists of a square well next to a rectangular tank covered with a barrel vault and a rectangular foot scraping area. Both the barrel vault and the footscraper consist of raw blocks of coral set in mortar, features which are unusual and may be a sign of early mosques.

The later mosque of Kaole is larger than its earlier neighbour and consisted of a central prayer hall supported by two rows of wooden columns. Each column was sunk deep into the ground and was encased in an octagonal masonry collar where it met the plastered floor of the mosque. Like the early mosque, the ablution area is at the south end of the building which is unusual in mosques of this date and may well result from the influence of the earlier structure.

Other important medieval sites in Tanzania include the ruins at Kilwa, Tongoni, Kunduchi and Mafia island. The ruins of Kilwa form a group on their own noted for the dense concentration of buildings and independent architectural development. Kilwa is the only place on the coast where dome construction was widespread and the only place where a significant continuity of occupation can be traced from the thirteenth to the sixteenth century.

Tongoni (from Swahili meaning 'ruins') is located on the north coast of Tanzania near the mouth of the Pangani river. The settlement, originally known as Mtangata, was founded in the fourteenth cen-
Tanzania

tury and flourished until the arrival of the Portu­
guese in the sixteenth century, although it contin­
ued to be inhabited until the eighteenth, when it
was finally abandoned. Remains at the site include
a mosque and over forty tombs, of which nearly
half are pillar tombs, which makes it the largest
concentration of this form of monument on the
coast. Only one of these pillars is still standing,
although the size and shapes of fallen pillars can
be worked out. Most of the pillars are cylindrical,
although some have square and octagonal sections
and nearly all have concave recesses or indenta­
tions which contained imported ceramic bowls
(usually Chinese celadon ware). The mosque con­
sists of a narrow central prayer hall, with a roof
supported on a central row of four columns and
two side aisles. Accessible through open archways
at the south end is a transverse room which may
have been used as a separate area for women.

The ruins of Kunduchi are located next to a
creek 20 km north of Dar es Salaam. The earliest
remains at the site date from the fourteenth century
which continued in use until the nineteenth cen­
tury. The standing remains consist of a mosque
and cemetery containing pillar tombs. The mosque
was built in the fifteenth century, although most of
the pillar tombs are from the eighteenth, which
represents one of the latest groups of pillar tombs.

The island of Mafia is located at the end of the
Rufiji delta about 15 km offshore. There are exten­
sive remains of several eighteenth- and nineteenth­
century settlements on the island. The most famous
of these, known as Kua, contains five mosques (at
least) and the remains of many eighteenth-century
houses. The mosques have a variety of mihrab
types which were developed in later nineteenth­
century mosques. The mihrabs at Kua include apses
decorated with blind arcades and an early example
of a recessed stepped minbar in the Friday mosque.
The houses at Kua are unique on the East African
coast and consist of two identical halves with a
single entrance. A typical house is entered through

Nine-domed mosque, Kilwa, Tanzania. Note pillar above central dome
a single gateway leading into a long transverse room; behind this is a doorway leading to two separate L-shaped passages which lead into a long reception room that opens on to a courtyard on one side and a small private room (harem) on the inner side. Sometimes there are additional buildings in the courtyard and sometimes there are two separate entrances. It is thought that the two identical halves may represent the family houses of two wives rather than a men's and a women's section. Nineteenth- and twentieth-century Islamic architecture in Tanzania is best represented in the cities of Bagamoyo and Dar es Salaam. Bagamoyo was the capital of German East Africa before the First World War and contains the various elements associated with a small colonial capital. The architecture is an interesting mixture of styles including Omani Arab, German, German Orientalist (i.e. Ottoman) and Swahili. Many of the more important government buildings are built in the style of Omani palaces with external verandas and carved wooden doors — the important addition of steel girders enabling larger spaces to be covered without support. After the defeat of the Germans in the First World War, Dar es Salaam replaced Bagamoyo as capital. Like the Germans in Bagamoyo the British in Dar es Salaam built official buildings in an Oriental style with modern materials; some of the more notable ones are the National Museum with its Turkish tiles and the old hospital.

**See also:** East Africa, Kilwa, Zanzibar

**Further reading:**

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**tilework**

*Glazed tiles are one of the most characteristic features of Islamic architecture.*

Three distinct tile formats were developed which may be characterized as single tiles, composite tile panels and tile mosaics. Single tiles are complete compositions which may include abstract designs or figurative representation but are independent of other tiles. Composite tile panels consist of several tiles carrying a design or picture which together form a complete composition. Tile mosaics are made of many pieces of monochrome coloured tile which are joined together to form a picture. There is also a fourth category which consists of three-dimensional glazed ceramics which are used to form architectural features such as mihrabs. The decoration of tiles may be classified according to the various techniques used, which are similar to those used on pottery. The simplest technique is to paint a tile with a monochrome glaze before firing. Extra colours may be added by coating the glaze with lustre after the first firing and then firing the tile a second time at a lower temperature. More complex polychrome tiles may be produced by using a technique known as 'cuerda seca' which uses coloured glazes separated by outlines made of a greasy substance which burns away after firing. Other techniques include overglaze painting (known as 'minai'), underglaze painting and relief moulded designs.

The earliest dated examples of Islamic tiles are those around the mihrab of the Great Mosque of Qairawan which were produced in Iraq sometime before 862 CE. These are square tiles (21 cm per side) decorated with abstract and vegetal forms in polychrome and monochrome lustre on a white ground. From the eleventh century onwards tiles replaced mosaics as the main form of wall decoration in many parts of the Islamic world. Three main tile-making traditions can be distinguished: these are Spain and North Africa, Turkey and Iran.

In Seljuk Iran the exterior surfaces of brick buildings were enlivened by blue-green glazed...
Timbuktu (also known as Tombouctou)

Bricks or tiles whilst alternating star- and cross-shaped minai tiles were used to decorate interiors. Other techniques developed during the Seljuk period include tile mosaics and decorative inscriptions which were generally restricted to blue, black, turquoise and green as the main pigments. In the fourteenth century potters working in Tabriz developed the cuerda seca technique which enabled them to adopt complex Chinese patterns. This technique continued to be used during the Safavid period and it was not until the nineteenth century that underglaze painting was introduced to Iranian tilework. The tilework of Iran also influenced the architecture of India to the east, in particular the area of present-day Pakistan. Generally Indian glazed tilework was restricted to tile mosaics and can be seen in the magnificent ‘Picture Wall’ at Lahore Fort. Indian craftsmen took the tile mosaic one stage further when they developed the technique of mirror mosaics which was later adopted in Iran.

In Spain and North Africa a technique of tile mosaic, known as zilij, was developed using yellow, green, blue and turquoise tiles. In the eighteenth century the Ottomans introduced the techniques of polychrome panels made of square or rectangular tiles. One of the main centres of production was Tunis, where tiles were decorated with green, yellow and blue designs. Before the fifteenth century several different formats of tile decoration were used in Anatolia which included tile mosaic, hexagonal, octagonal, star- and cross-shaped tiles. In the fourteenth century the Ottomans adopted the Persian technique of cuerda seca for the brilliant green tiles which characterize early Ottoman mosques such as the Yeşil Camii in Bursa. However, the most significant development came in the sixteenth century when the potteries of Iznik began producing tilework for imperial use. The achievement of Iznik potters was to produce tiles with underglaze colours which remained stable under the glaze. Characteristic colours of Iznik tiles are blue, turquoise and red against a white background.

See also: Iznik, tilework

Further reading:

Timbuktu (also known as Tombouctou)

Famous Islamic trading city in Mali, West Africa.

Timbuktu is located on the southern edge of the Sahara several kilometres north of the Niger river. According to tradition the city originated as a nomadic Tuareg encampment in the twelfth century. The encampment would have consisted of tents made out of acacia wood frames covered over with mats and animal-skin canopies. In 1325 the city was conquered by Mansa Musa who incorporated it into the empire of Mali. During this period the famous Andalusian poet and architect Abu Ishaq al-Saheli visited the city and built a mosque there. Several years later in 1333 the city was burnt and pillaged in an attack by Mossi tribesmen from Yatenga (present-day Upper Volta) although it was later rebuilt by Sulayman the emperor of Mali. The rule of Mali ended in the fifteenth century and for the next forty years the city was controlled by Tuareg nomads until its annexation by Ali the ruler of Gao in 1468. During this time Timbuktu became the main centre for the trade with North Africa and enjoyed its greatest period of prosperity. This was brought to an abrupt end with the Moroccan invasion of 1591, although the city managed to remain more or less independent until 1787 when it passed into the control of the Tuareg. In the nineteenth century the city was incorporated into the Fulbe state of Massina and remained under nominal Fulbe control until the advent of French colonialism in the late nineteenth century. Despite these conquests by various groups and dynasties, Timbuktu remained substantially independent for most of its history due to its position on the border of the desert.

The first known European visitor was Caillié who wrote the following description of the city in 1828: The city of Timbuktu forms a sort of triangle, measuring about three miles in circuit. The houses are large, but not high, consisting entirely of a ground floor. In some a sort of water closet is constructed above the entrance. The city has retained this triangular configuration into recent times although new houses have been built around the central core. The city is divided into five districts, or quarters, traditionally inhabited by different ethnic groups — the Ba Dinde, the Sarekaina, the Bella Faraj, the Sankoré and the Dijinguéré Ber. The Dijinguéré Ber quarter is generally
thought to be the oldest Muslim part of the city and in earlier times may have been separated from the rest of the town with its own city wall. The Saré-kaina quarter, also known as the Sane-gungu quarter, is the area inhabited by the rulers and political élite; in this area are the largest houses and also the remains of the Moroccan kasbah built on the site of the Songhay royal palace. The Sankoré quarter in the north-west tip of the city is the area formerly inhabited by the Berber tribes and is said to have been founded by Sidi Mahmoud a sixteenth-century immigrant from Oualata. The main material of construction in Timbuktu is mud brick, although stone is used for strengthening the walls and in important places such as doorways. Early nineteenth-century descriptions of the city describe the making of hand-rolled round bricks which are then baked in the sun. Roofs are made of split palm beams and palm-frond matting which is then covered with earth. Construction is in the hands of a group of Songhay-speaking people known as the 'gabibi' who are also responsible for gravedigging.

The major monuments of the city are the three ancient mosques each located in a different quarter of the city. Reputedly the oldest building is the Sankoré Mosque, which was founded by a woman during one of the periods of Tuareg rule, possibly during the thirteenth century. The building was subsequently repaired, rebuilt and developed so that in its present form it consists of an irregular form based around a square central courtyard. This courtyard seems to represent an early phase of the mosque's development as it conforms to the dimensions of the courtyard built by Qadi al-Aqib in 1581. On the south-east corner of the mosque is a small, square, entrance vestibule built during Fulbe rule in the nineteenth century to serve as a Shar'ia court. The mosque contains two mihrabs, a small one in the east wall of the interior courtyard and a larger one in the east wall of the sanctuary. The larger mihrab is located north of the centre of the

Great Mosque, Timbuktu, Mali (after Prussin)
east wall and externally consists of a tower-like conical projection similar to that of the Dijinuére Ber Mosque. The dominant feature of the building is the minaret on the south side of the courtyard, consisting of a large stepped pyramid similar to that of the mausoleum of Askia Muhammad at Gao. However, the Sankoré minaret is slightly smaller and has an internal staircase instead of external stair ramps as at Gao.

The most famous mosque in Timbuktu is the Dijinuére Ber Mosque, which was built between 1324 and 1327 by Mansa Musa emperor of Mali after his return from the Hajj. The mosque is attributed to the architect Abu Isaq al-Saheli who built a royal audience chamber at the same time. Today there is no trace of the audience chamber which may have resembled that of the capital at Niani described by contemporary Arab travellers. Like most other ancient buildings in the city the mosque underwent several successive stages of construction and repairs. As it stands at present the plan of mosque consists of a roughly rectangular sanctuary with a small internal courtyard at the northern end and a large double-walled external courtyard on the western side. The oldest part of the mosque is generally agreed to be the western part of the sanctuary. In this part there are round arches made of dressed limestone supporting the roof, a feature not found elsewhere in West Africa until the colonial period. Like the Sankoré Mosque the Dijinuére Ber has two towers, a conical mihrab tower with projecting toron (acacia wood stakes) and a tapering square minaret adjacent to the interior courtyard.

The third ancient mosque in Timbuktu is the small complex in the centre of the city known as the mosque of Sidi Yahyia built in the mid-fifteenth century. This consists of a rectangular sanctuary attached to a short, square, tapering minaret enclosed within a large outer courtyard. The sanctuary is four bays deep and has three entrances on the short northern side and two entrances in the eastern wall either side of the wide shallow central mihrab. According to tradition, the first imam of the mosque is buried under the minaret, a concept that parallels the stepped pyramid minarets of the Gao and Sankoré mosques.

The houses of Timbuktu are either single-storey or two-storey courtyard houses. The two-storey houses tend to be more elaborate and are mostly confined to the Sané-gungu quarter inhabited by the chief merchants. From the outside the houses are generally quite plain with shallow square buttresses dividing the wall into panels. The doorways are fairly simple with wooden doors decorated with Moroccan brass bosses, although this has been superseded by snipped tin decoration. Above the main doorway is a single window, decorated, containing a Moroccan-style hardwood grille. Each grille consists of two parts, opening shutters recessed within a horseshoe arch on the top and the wooden grille below made of intersecting wooden strips (cf. mashrabiyya). The houses are entered via an outer and inner vestibule which leads out on to a square courtyard from which the other rooms of the house can be reached. In a two-storey building there are men's rooms either side of the courtyard, whilst in a single-storey house the single men's room is to the right of the entrance. In larger houses there is usually a secondary courtyard for women behind the main courtyard. In two-storey houses latrines are usually on the upper floor above a sealed latrine shaft (sekudar).

See also: Agades, Oualata, West Africa

Further reading:

Timurids

Central Asian dynasty founded by Timur which flourished from the end of the fourteenth century to the end of the fifteenth.

Timur was born a member of the Barlas tribe and claimed descent from the Mongol Khan Chatagay. By 1370 Timur had gained control of Samarkand and Balkh after which he spent ten years consolidating his control of Central Asia. From 1381 Timur extended the range of his operations and managed to gain control of Iran, Iraq, Syria, the Caucasus and Delhi. In 1402 Timur's excursions into Anatolia brought him into conflict with the Ottoman sultan Bayazit whom he defeated and captured at the battle of Ankara. One of the results of these wide-ranging conquests was the collection of skilled craftsmen from all over the Middle East who were used to enrich the new capital at Samarkand. Timur died in 1405 and was succeeded by his son Shah Rukh who ruled the empire from Herat where he had been governor during the reign of Timur.
Samarkand was ruled by Shah Rukh's son Ulugh Beg whilst Fars was ruled first by his nephew Ibrahim. By the mid-fifteenth century the western provinces were mostly lost to the Turkmans leaving Herat as capital of a much diminished empire which continued until 1507 when it was taken over by the Turkmans.

The main building material employed for imperial monuments was baked brick although dressed stone was used in Azerbaycan. The standard brick form was square (24–27 cm per side and 4–7 cm thick) whilst cut or moulded bricks were relatively rare compared with earlier periods. Mortar was usually quick-setting gypsum plaster rather than the more common lime plaster. The standard method of exterior decoration was tile revetments which were on a larger scale than in previous periods. Two main forms of tilework were used, tile mosaic, with individual coloured pieces cut to form patterns, and underglaze-painted tiles known as ‘haft rangi’ (seven colours). The underglaze-painted tiles tended to be of a lower quality but were useful for covering large areas. A large variety of arch forms were used including round, two-, three-, and four-centre arches, although the most common was the three-centred arch with a high crown, where the height of the arch was more than half the height of the entire opening. A large variety of domes and vaults were employed which displays the wide range of influences in Timurid architecture. One of the most significant vaulting forms employed was based on the use of wide transverse arches spanning between parallel walls. Vaults of various forms were then built to cover the area between each transverse arch to produce a large vaulted area. The vaults used to span the arches included tunnel or barrel vaults, stellar vaults and cross vaults, all of which produce characteristic humps on the roofs of buildings.

Dome forms became increasingly distinctive under the Timurids with the development of double-shell domes where there is an outer dome and a shallower inner dome. The characteristic outer dome form consists of a tall 'melon-shaped' structure set on a high drum and decorated with ribs covered in decorative tilework.

The most characteristic feature of Timurid imperial buildings is their massive scale, emphasized by huge entrance portals and thick minarets covered in tile decoration. Internally the buildings are slightly less well organized and they often have a large variety of smaller rooms whose relationship to the overall plan is not always evident. The most famous of the Timurid monuments are the shrine of Ahmed Yasavi at Turkestan (Yasi) in Khazakstan and the Masjid Jami' at Samarkand. The monuments are quite similar in their scale and conception with huge portal iwans behind which rise characteristic melon-shaped domes on high collars or drums. The Ahmed Yasavi tomb was built by Timur for his son Jahangir whilst the Masjid Jami' at Samarkand was built to commemorate the Timurid capture of Delhi. Other monumental projects carried out by Timur include the mausoleums at Shahrisbaz (his first capital) for his father Targhay and the Gur-i-Amir for his son Muhammad Sultan at Samarkand. In addition Timur undertook massive civil engineering projects including building the towns of Baylaqan, Shahrubhiya and Iryah, the citadels and walls of Ghazui, Balkh and Samarkand.

The later Timurid buildings of Herat in Afghanistan mirror those of the early Timurid Empire, although many were destroyed in the nineteenth century. One of the most celebrated buildings in Herat was the mosque and madrassa built by the architect Qavam al-Din for the wife of Shah Rukh. Little is left of the complex except for two minarets at diagonally opposite corners of the mosque and a minaret and iwan from the madrassa. The best preserved Timurid structure in Herat is the shrine of the mystic of Khwajeh 'Abdallah Ansari at Gazur Gah. The complex is built on the plan of a four-iwan madrassa and oriented to the qibla (i.e. east–west) with the entrance in the centre of the west façade. The entrance portal consists of a large iwan, half-octagonal in plan, leading into the rectangular central courtyard. There is a mosque and cells for mystics at the western end, whilst at the eastern end is a shallow iwan set into a tall pishtaq.

See also: Herat, Iran, Samarkand

Further reading:
in the eleventh century. The most important Almoravid contribution to the city was the Great Mosque which survives in the centre of the town. The prayer hall consists of thirteen aisles running perpendicular to the qibla wall and covered with pitched tile roofs. Like other Almoravid mosques the courtyard arcades of the Great Mosque open directly into the prayer hall. The minaret which stands opposite the qibla was added in 1136. The most astonishing feature of the mosque is the lavish decoration in the area of the mihrab which includes stone panels with intricately carved stylized flora. Covering the area in front of the mihrab is a magnificent perforated dome carried on sixteen brick ribs and four small squinches. Between the ribs there is an intricate stucco latticework of stylized floral motifs whilst at the apex of the dome is a small mugarnas cupola. The entire dome is covered by a tiled roof on the exterior.

The other important mosque in Tlemcen is the al-‘Ubbad Mosque built by the Marinid sultan Abu al-Hasan in 1339. The mosque is raised on a plinth and approached by a monumental staircase leading to a ceremonial projecting porch with an entrance hall behind it. The entrance hall leads on to a small courtyard behind which is the prayer hall. The whole structure is covered with opulent decoration in the form of carved stucco work, glazed tiles and delicately carved stone.

See also: Algeria

Toledo

City in central Spain famous as first Arab capital of Spain and later major Islamic and Christian city.

Toledo was the capital of the Visigoths until its capture in 712 CE by the Arabs, who used the city as their capital until they moved to Córdoba in 717. The city remained an important frontier city until its capture by the Christians in 1085, and even after this Muslims and Jews continued to make important contributions to the intellectual life of the city with translations of scientific treatises.

Despite its fairly early conquest by the Christians, substantial remains of the Islamic period are still standing, together with some notable examples of Mudéjar architecture. The walls of the city contain many early sections including the Bab al-Qantara (c. 850) which is thought to be the earliest use of a bent entrance in Spanish fortifications. Access to this gate is via a bridge known as the Puente de Alcantara (866–71) which has a magnificent high-sprung central arch similar to those of Seljuk bridges in Anatolia. Probably the most famous gate of the city is the Old Bisagra Gate (also known as Puerta de Alfonso VI) through which El Cid entered the city in 1085. The gate is a monumental structure built out of huge uneven blocks near the ground and smaller pieces of coursed rubble near the top. The gateway is flanked by two blind niches with pointed horseshoe arches resting on engaged columns. The gateway itself is recessed behind a wide arched machicolation and consists of a round horseshoe arch with a huge stone lintel spanning the width between the two impost.

Within the city there are several important religious buildings which are Cristo de la Luz (mosque of Bab al-Mardum), Santa María La Blanca (a former synagouge), the Sinagoga del Transito and the cathedral. The mosque of Bab al-Mardum is a nine-domed mosque with a raised central dome built in 999. Originally there were triple entrances on three sides with a mihrab on the south side. Three of the outer faces are made of brick and decorated with a band of Kufic inscriptions, below which is a geometric panel above decorative intersecting round horseshoe arches.

The church of Santa María La Blanca was built as a synagogue in 1250 and contains four rows of arches supported on octagonal brick piers with capitals decorated with fir cones and punctuate scrolls. More well known is the Sinagoga del Transito built in 1357 during the reign of Pedro the Cruel. The building is lavishly decorated with carved plaster and woodwork, with Arabic and Hebrew inscriptions and coloured tiles. The cathedral of Toledo was once the Great Mosque of the city and possibly contains the remains of a large Córdoba-style mihrab, now the octagonal chapel of Ildefonso.

See also: Córdoba, Granada, Mudéjar, Seville, Spain, Zaragoza

Tomb of the Abbasid caliphs (Cairo)

Mid-thirteenth-century tomb in Cairo containing tombs of the Abbasid caliphs who were taken there after the Mongol sack of Baghdad.

The date of the tomb is not known; some attribute it to the Ayyubid period whilst others believe it was built by the Mamluk sultan Baybars in the 1260s. The complex is one of the most highly decorated buildings to have survived in Cairo with
finely carved stucco and painted Kufic inscriptions. The mihrab is a keel-arched niche, with a central medallion from which lines radiated to form a muqarnas frame to the opening. The dome is supported on two-tier muqarnas squinches between which are carved niches and windows.

Topkapi Palace

*Imperial Ottoman palace in Istanbul founded by Mehmet II in 1459.*

The Topkapi replaces an early royal palace that was established between the old forum and the Golden Horn. This early palace was built predominantly of wood and surrounded by a high wall.

The Topkapi Palace is located on the old Byzantine acropolis and overlooks the Sea of Marmara and the Bosphorus. The building consists of four great courtyards built over a period of four hundred years. Most of the early buildings in the palace were probably built of wood and have not survived the great fires of 1574 and 1665. Fifteenth-century buildings which have survived include the kitchens, the treasury, the physician's building and the Çinili Kiosk. The kitchens on the south side of the second court consist of a long building covered with huge domed chimneys and ventilators. There are several other kitchens in the palace including a separate women's kitchen, a hospital kitchen and several smaller private ones. The treasury is built as a long six-domed hall in the form of a small bedestan and is located in the second court. One of the most unusual buildings of this period is the Physician's Tower, a square building with extremely thick walls and a small chamber on the top. It has been suggested that the lower building was a drug store whilst the upper room was the doctor's office. Outside the main area of the palace but within the outer walls is the celebrated Cinili Kiosk. Designed by a Persian architect, this has many Persian features such as the wide arches. It is set on a raised platform reached by external steps and has a four-iwan plan with a tall dome above the centre.

During the sixteenth century the architect Sinan carried out extensive work at the palace including building (or rebuilding) the vaults supporting the east end. Other work carried out at this period was the building of Murat III's bedchamber next to a heated outdoor pool. Unfortunately another fire in 1574 destroyed large areas of the palace which had to be rebuilt. This was taken as a chance to remodel much of the palace including the kitchens and the wooden quarters of the Halberdiers (halberd carriers) which were completely rebuilt at this time. A second fire in 1665 led to another period of rebuilding and refurbishment particularly of the harem area. Important buildings from the seventeenth century include the Baghdad Kiosk erected to celebrate the reconquest of that city.

During the early eighteenth century the palace was redecorated in the Ottoman baroque style. A new bath house for the sultan and a palace school were built at this time, both of which include lavish decoration in the European style. In 1789 Selim III became sultan and instituted a series of apartments or salons in the French Rococo style. These buildings had large European glazed windows and were decorated in ornate painted plasterwork. In the mid-nineteenth century the sultans moved to a new palace (the Dolmabahçe) on the banks of the Bosphorus which was more fashionable and not cluttered with associations of the past.

See also: Istanbul, Ottomans

Further reading:


toron

*West African term for projecting wooden stakes used in mud-brick architecture especially in minarets.*

The preferred material is acacia wood although split palm is sometimes also used. It is generally agreed that toron have a practical purpose as fixed scaffolding for mud-brick structures which need constant maintenance, although they may also have a symbolic and aesthetic function. Symbolically the use of projecting wooden branches relates the structure to a tree which in West African tradition is a symbol of renewal and rebirth, an idea strengthened by the fact that toron are primarily associated with religious structures. Aesthetically toron may be compared to the horns used in hunting towers (as in e.g. Manara Umm al-Qaroun in Iraq, or the Hiran Manar at Fatehpur Sikri).

See also: Manding, West Africa
Tripoli (Lebanon)

Tripoli is located on the north coast of Lebanon and in the medieval period was the principal port.

Tripoli has a long history of settlement although it first became a city in 358 BCE under the Phoenicians. The city was captured by the Muslim Arabs in the early seventh century CE and became a flourishing Arab seaport until 1109, when it was captured by the Crusaders. For nearly 200 years Tripoli was one of the principal Crusader ports and was one of the last Crusader cities to be recaptured by the Muslims. The city was finally retaken in 1289 and an ambitious programme of reconstruction was initiated. The Mamluk city was built on a new site slightly inland from the Crusader city. Tripoli flourished during this period with a series of nine mosques, sixteen madrassas and five khans constructed before the Ottoman conquest of the sixteenth century. The principal mosque of the city (the Great Mosque) was built in 1294 and includes a Crusader tower which was converted into a minaret. The city remains one of the best examples of Mamluk planning and architecture outside Egypt.

See also: Lebanon, Mamluks

Further reading:

Tripoli (Libiya)

Capital city of Libiya located on the Mediterranean coast.

The name Tripoli derives from the Roman term for the three cities of Tripolitania, which were Leptis Magna, Oea and Sabratha. The present city of Tripoli is built on the site of Oea.

Tripoli was first conquered by the Arab armies of Camr ibn al-As in 643 CE. The captured Byzantine city had a wall which was pulled down by the Arab conquerors and later rebuilt at the end of the Umayyad period. The remains of the Umayyad wall have recently been discovered by archaeologists who have identified a stone wall 6–7 m wide.

Apart from the Umayyad wall there are few remains of the early Islamic period in the city. The oldest mosque is the al-Naqah Mosque which has been interpreted as the mosque of Camr ibn al-As, although it is more likely that it was built by the Fatimid caliph al-Muciz in 973. The al-Naqah Mosque is roughly rectangular, measuring approximately 20 by 40 m, and divided between the courtyard and the sanctuary. The sanctuary is covered by forty-two brick domes supported on columns, some of which have Roman capitals. The mihrab is in the middle of south-east side of the courtyard and has a slight turn to the east to correct the misalignment of the original building.

Most of the other remains in Tripoli date from the Ottoman period when the city was the most westerly Turkish port. The present city walls date from the sixteenth century as testified by Turkish inscriptions on some of the gates. One of the oldest Ottoman buildings is the mosque of Darghut, governor of Tripoli and Turkish commander, who died in 1564 during the siege of Malta. The mosque has a T-shaped plan with a central area divided into fifteen domed bays flanked by two six-bay annexes recalling the tabhanes of Ottoman mosques elsewhere. Behind the qibla wall is a square domed room which contains the tomb of Darghut Pasha. To the south-west of the mosque is a bath house which is built on the remains of Darghut’s palace. The most celebrated Turkish mosque is that of Ahmad Pasha al-Qarahmanli built by the semi-independent Turkish governor in 1736. The mosque is located in the middle of a square complex which includes a madrassa, graveyard and the tomb of Ahmad Pasha. The sanctuary consists of a square area covered with twenty-five domes (i.e. five arcades of five bays). There is no courtyard but there is an L-shaped ambulatory on the north-west and south-west sides. In addition there is a raised gallery at first floor level opening on to a wooden balcony which runs around three sides of the sanctuary. The whole building is decorated with fine green, yellow and blue tiles imported from Tunis.

In addition to mosques Tripoli contains many examples of Ottoman houses and funduqs. The houses are usually two-storey structures built around a central colonnaded courtyard and are decorated with polychrome tile and stucco decoration. A typical funduq has a similar design, consisting of a two-storey structure built around a central courtyard. The lower floors are usually used for storage and the upper floor for shop units. There also used to be many bath houses, but only three of these have survived.
Tulunids

Dynasty which ruled over Egypt and Syria in the late ninth and early tenth century.

The dynasty was founded by Ahmed ibn Tulun, the son of a Turkic soldier from Bukhara who was based at the Abbasid capital of Samarra. Ahmed was originally sent to Egypt as deputy to the governor but soon acquired the governorship himself. As governor of Egypt Ahmed soon extended his power to Syria and Palestine whilst the Abbasids were distracted by rebellions in lower Iraq.

Ahmed's son and successor Khumarawayah received official recognition of his position from the caliph when he was granted Syria and Egypt in return for an annual tribute of 300,000 dinars. By the time of Khumarawayah's death in 896 the empire was weakened by extravagance and internal revolts. Three more Tulunid rulers followed but in the next ten years their situation was so weakened that in 906 an Abbasid general was able to take over Egypt and put an end to Tulunid rule.

Architecturally the most significant member of the dynasty is Ahmed ibn Tulun who established a new city as his capital in Egypt. This city was known as al-Qaqiç and was effectively an addition to Fustat. The city was famous for its similarity to the great Abbasid capital of Samarra. Not much remains of Ahmed's city but it is known to have had a triple-arched public entrance like the Bab al-Amma at Samarra, a polo ground, race track and park for wild animals. Ahmed also built structures useful to the general population such as a 60,000-dinar hospital. However, the only monuments remaining are the congregational mosque of Ibn Tulun and an aqueduct. The mosque displays certain similarities to the congregational mosques of Samarra, in particular the minarets. The aqueduct is built of brick and has a large inlet tower at the village of Basatin about two miles south of the citadel.

Ahmed's son Khumarawayah is known to have built a beautiful palace with a golden hall decorated with sheets of gold carrying representations of himself and his wife. Not surprisingly the palace has not survived.

Further reading:

Tunis

Capital city of Tunisia since the thirteenth century.

Although smaller than that of Qairawan, the Great Mosque of Tunis (known as the Zaituna Mosque) has a similar history and design. The first mosque on the site was built in 732 to be replaced in 863 with the Aghlabid structure which forms the core of the present mosque. The prayer hall consists of fifteen aisles running east-west (i.e. perpendicular to the qibla wall) with the mihrab at the end of the central aisle, which is both wider and taller than the other aisles and surmounted by a dome at the end next to the mihrab; there is also a dome over the entrance, but this was added later, in the eleventh century. Both domes are ribbed and rest on shell squinches like the domes of the Great Mosque of Qairawan. The Tunis mosque is also famous for its role as a university. Next to it is an ablutions courtyard constructed by the Hafsid rulers in the fourteenth century which is one of the best examples of Tunisian decorative architecture. In the centre of the courtyard is an octagonal fountain and the whole area is decorated with white marble with black marble inlay.

Other important mosques in Tunis are the Qasr Mosque built in the twelfth century and the mosque of the Kasba built in the thirteenth century. The latter is interesting as one of the best examples of Andalusian influence in Tunisian architecture with its decorated minaret and ornate stucco decoration.

Tunis also contains a number of eighteenth-century palaces.

See also: Aghlabids, Tunisia
Tunisia

Further reading:
— Palais et demeures de Tunis (XVIIe et XIXe siècles), Paris 1971.

Tunisia

North African country named after its capital Tunis.

Tunisia is a predominantly coastal country located between Algeria and Libiya. Northwards, a short distance across the sea, is the island of Sicily. Physically the country can be divided into three regions, a forested mountainous area to the north, a central plain watered by the Wadi Mejerda and a drier mountainous region to the south.

Tunisia has a long history of settlement starting with the Phoenician ports of the ninth century BCE. The greatest of these ports developed into the city of Carthage which dominated the trade of the Mediterranean until it was destroyed by the Romans in 146 CE. For a short period after the collapse of Roman rule the country was taken over by the Vandals until they were expelled by the Byzantines who ruled the country up to the time of the Arab conquest in 640. During the early Islamic period the country was known as Ifriqiyya with its capital at Qairawan. In the ninth century the country was ruled by the semi-autonomous Aghlabid dynasty who undertook the conquest of Sicily. During the tenth century the country became a base for the Fatimids before they moved to Egypt in 969. Tunisia’s prominent position in Islamic history was brought to an end in the mid-eleventh century by the invasions of the Banu Hilal from northern Egypt. In a reversal of history the Normans of Sicily occupied the country for a short period in the mid-twelfth century until they were expelled by the Almohads. Following the Almohad victory Tunisia was ruled by a local dynasty known as the Hafisids who remained in power until the sixteenth century. In 1574, after a struggle between the Turks and the Spanish, the Turks gained the upper hand and Tunisia was incorporated into the Ottoman Empire. During the eighteenth century the country was ruled by a local dynasty known as the Husseinis, who, with increasing French help, ruled the country up to 1945 when Tunisia became an independent republic.

The main building material in Tunisia is stone which may either be finely dressed ashlar or smaller squared blocks. Baked brick was used, particularly in the early Islamic period for buildings like the Great Mosque at Qairawan. Roman and Byzantine material, in particular columns, formed one of the major building materials for early Islamic buildings. As elsewhere in North Africa the horseshoe arch was the dominant arch form in monumental architecture. A certain amount of wood was available for roofs although generally buildings were covered with stone vaults. From the fifteenth century onwards glazed tiles became a common architectural feature which has survived until the twentieth century.

Tunisia is noted for the large number of religious buildings surviving from before the tenth century. The oldest Islamic monument in Tunisia is the Great Mosque of Qairawan which was built in 670 by ‘Uqba ibn Nafi. Little remains of this early mosque which was rebuilt more than three times until 862 when it reached its present form under

Ribal of Susa, Tunisia © Creswell Archive, Ashmolean Museum
the Aghlabid ruler Abu Ibrahim Ahmad. The plan of this building became a model for later Tunisian mosques. The standard form comprises aisles running perpendicular to the qibla wall with a raised aisle in the centre leading to a domed cupola in front of the mihrab. In addition there is usually one (or more) aisle running parallel to the qibla wall forming a T-plan. Examples of this style include the Great Mosques of Tunis, Susa, Mahdia, Monastir and Sfax – only the Great Mosque of Tozeur differs from it, with aisles running parallel to the qibla wall. This mosque form remained remarkably constant and even continued after the Ottoman conquest although there are examples of mosques of pure Ottoman form such as the Sidi Mahriz Mosque in Tunis.

Other religious structures include the ribat or fortified convent, an architectural form particularly characteristic of Tunisia. One of the best examples is the Ribat of Susa which was built by the Aghlabid ruler Ziyadat Allah in 821. This consists of a square building (95 m per side) with a central courtyard, towers at the corners and a monumental entrance. Three of the corner towers are circular whilst the fourth is square and forms a base for a cylindrical watchtower. The ground floor contains numerous rooms opening from the courtyard whilst on the first floor above the entrance there is a large prayer hall covered with barrel-vaulted aisles perpendicular to the mihrab. Other examples include the three ribats of Monastir, the oldest of which was founded in 796.

There is a wide variety of traditional house types in Tunisia from the bedouin tent to sophisticated courtyard villas. In southern Tunisia there are fortified settlements (qurbs) which contain several tiers of barrel-vaulted rooms (ghorfas) arranged around a courtyard. The appearance of these structures is quite organic and resembles a beehive. Most of the time they are used for storage, but they could be used as dwellings in times of trouble. The standard form of village house is a windowless, flat-roofed structure, with a central courtyard used for animals. Town houses are a developed form of the village house; they are often two storeys high and decorated with polychrome glazed tiles. The houses of Tozeur are noted for their decorative brickwork facades. In Tunis there are a number of eighteenth-century Ottoman palaces and mansions. These are usually multiple courtyard structures with extravagant decoration which is a mixture of Islamic and European style.

See also: Aghlabids, Qairawan, Tunis

Further reading:

turba (or turbe)
Mausoleum.

**Turkey**

The Republic of Turkey occupies a position between Asia and Europe and comprises Anatolia and Turkish Thrace.

Turkey is a large country open to the sea on three sides with the land route to the Middle East and Asia on the fourth side. The country may be divided roughly into five areas, each with a different environment and culture. West of Istanbul is Turkish Thrace, a green area with many connections with the Balkans. The northern part of the country stretching along the Black Sea coast is heavily wooded, with a high rainfall and cultural connections with Russia, Ukraine and other former Soviet Republics. The central area, where the capital Ankara is situated, is known as the Anatolian plain and has an extreme climate which produces snow in the winter and very hot summers. This area is largely inhabited by rural farmers although there are also Turkish nomads with tents. To the south and west is the Aegean and Mediterranean coast which has a mild climate and rich classical heritage. To the east, on the borders of Iraq and Iran, is a harsh mountainous area with a mixed population of Kurds, Armenians and Turks. Historically Turkey’s position has meant that it has often been the scene of conflict between East and West, although the corollary of this is that it has also become extremely wealthy through East-West trade. Until the eleventh century most of Turkey was controlled by the Byzantine Empire which ruled from its capital at Constantinople (later Istanbul). During the ninth century there were regular Muslim raids which were sometimes quite successful. One of the largest raids was that of 858 when the city of Amorium was occupied.
Turkey and marble columns were taken back and used at Samarra. However, not until the eleventh century did the Byzantines, who had already lost the Middle East and North Africa to Islam, begin to lose large amounts of territory to the recently converted Seljuk Turks. In the early thirteenth century the Byzantines suffered a further blow when Constantinople was sacked by the soldiers of the Fourth Crusade. By the beginning of the fourteenth century Byzantine control was reduced to the area around Constantinople and Trabzon to the east on the Black Sea. In 1453 Constantinople was taken by the Ottomans who by the early sixteenth century controlled all of modern Turkey as well as large areas beyond its borders. In 1922 the Ottoman sultanate was abolished and replaced by the Turkish Republic under Mustafa Kemal Atatürk who instituted a policy of modernization and secularism.

The traditional architecture of Turkey reflects this varied landscape and rich history with many regional styles. A large range of building materials are employed including mud and baked brick, wood, stone and nomad tents.

The traditional Turkic nomad tent is known as a yurt and consists of a round wooden frame covered with a skin or hair tent. In south-western Anatolia the traditional Arabic type is found, comprising a black goat-hair tent which is supported with wooden poles and long ropes anchored with pegs. Mud brick is employed predominantly in the south-east of the country and in central Anatolia. At the town of Harran near the Syrian border houses are built out of one or more square mud-brick units, capped with flat-topped or pointed conical domes. In central Anatolia rectangular houses are built out of mud brick with stone foundations and roofs of wood and mud. The houses have thick walls with few windows to conserve heat in the winter and remain cool in the summer. Rooms are heated by open dung fires with a hole in the roof or an earthenware jar as a chimney. The roofs are built with roughly shaped timber branches up to 4 m long laid perpendicular to the walls of the house and covered with a layer of thatch which is then covered with mud. The mud on the roof is kept flat and waterproof with a section of column or other cylindrical stone which is rolled over the roof.

Baked brick in Turkey derives from two independent traditions, the Byzantine and the Persian Seljuk tradition. During the Byzantine era baked brick was one of the main building materials, especially in the cities of western Anatolia. This tradition continued into the Ottoman period and bricks are still one of the main building materials alongside the ubiquitous concrete. The usual method of using the flat tile-like bricks was in combination with rubble stone or dressed stone construction in alternate layers. Seljuk Persian brickwork was restricted in its impact on eastern Anatolia because of the strong stone-carving tradition already prevalent there. However, baked brick was often used in minarets in the west where it was sometimes arranged in decorative patterns in a manner alien to Byzantine practice. Glazed bricks are another technique imported into Anatolia by the Seljuks, although the most famous example is the Ciniili Kiosk in the Topkapi Palace which was built by a Timurid architect.

In north-western Turkey and on the coast of the Black Sea wood is fairly plentiful and is the main building material. It is used in a number of ways from all-timber constructions to buildings with stone or brick walls and a wooden superstructure. Some of the oldest surviving wooden structures are Seljuk-period mosques which have been preserved because of their religious importance. A good example is the Aslan Cami in Ankara which has walls built of re-used stone and brick and an interior made of wooden columns supporting a flat roof made of wooden beams. However, most wooden structures are not more than 250 years old so that a large part of the architectural tradition is lost. The standard form of a traditional wooden town house consists of a stone basement, on top of which is built a rectangular platform cantilevered to project out above the street. Although the basement may be irregular, this is corrected on the upper floors where the cantilevering is used to produce a rectangular shape. Windows are often built to project an extra half-metre or more beyond the façade to give views along the street. Many houses are three storeys high including the basement, although it is likely that in the past most were one or two storeys high. In Istanbul many of the houses are clad in external weather-boarding, but elsewhere the walls of the houses are made of lath and plaster. Inside the grander houses the ceilings are often decorated with painted scenes on plaster or wood.

Stone buildings represent the largest group of
historical buildings in Turkey from the eighth-century mosque at Harran to the eighteenth-century baroque mosques of Istanbul. The material used varies according to the region; thus in Diyarbakir black basalt is used whereas in Edirne red sandstone is employed in conjunction with yellow limestone. The most basic form of stone construction can be found in the Gourami region near Kayseri where houses are built out of the abandoned caves previously used by Christians. The houses may either consist of a cave on its own or a cave with a stone-built arched porch. Some of the most sophisticated stonework is found in the carved doorways of the Seljuk period in Konya, Nigde, Erzerum, Kayseri and Sivas. Probably the most spectacular example is the doorway of the Gök Madrasa in Sivas which combines intricate calligraphy and floral designs with bold carved borders. Ottoman stonework by contrast tends to be fairly austere with a restrained use of carved decoration relying instead on the form and mass of the building.

See also: Bursa, Byzantine architecture, Diyarbakir, Edirne, Istanbul, Konyo, Seljuks, Ottomans
Turkmenistan

Further reading:
R. M. Riefstahl, Turkish Architecture in South Western Anatolia, Cambridge, Mass. 1931.
M. Sözen and M. Tapan, 50 Yılın Türk Mimarisi (50 Years of Turkish Architecture), Istanbul 1973.

Turkmenistan

Former Soviet Central Asian Republic which lies to the east of the Caspian Sea and to the north of Afghanistan and Iran.

Geographically Turkmenistan is defined by the Kopet Dag mountains along its southern border with Iran and to the north by the Amu Darya (Oxus) river which separates it from Uzbekistan.
The Kara Kum desert covers the central part of Turkmenistan dividing the country into north and south. Before the construction of the Kara Kum canal at the beginning of this century habitation in southern Turkmenistan was only possible at oases where rivers from the Koppet Dag mountains disappeared into the sands of the Kara Kum. The most famous of these desert oases was the ancient city of Merv (qv) fed by the Murghab river.

Mud brick is the principal construction material although fired brick is used for monumental architecture. To the north along the Amu Darya wood is often used for columns and roofs.

Buildings of the early Islamic period, from the eighth to eleventh centuries CE, are mostly found in the area around Merv although there may also be isolated buildings of the period in the Kara Kum desert. Many buildings of the eleventh to thirteenth century Seljuk period have survived in particular at Serakhs on the border with Afghanistan, at Mestorian in the south-west and at Urgench on the border with Uzbekistan. These are mostly religious buildings characterized by elaborate brick decoration, epigraphic bands, the use of stucco, and the combination of mud brick with fired brick. Buildings of the later medieval period are more difficult to identify, although the city of Bairam Ali near Merv preserves the layout and walls of a fifteenth- to sixteenth-century Timurid city. Probably the most significant Islamic building of later periods is the Great Mosque of Anau, destroyed by an earthquake in 1948, most of which dates to the seventeenth century. The mosque comprises a huge domed iwan flanked by twin minarets and two smaller domed chambers on either side of the courtyard. The façade of the iwan was decorated with polychrome tiles depicting dragons and elaborate decorative brickwork.

After the Russian conquest in the nineteenth century Islamic forms were used in buildings of Russian design such as the Tsar’s hunting lodge at Bairam Ali which employs domes, crenellations and minaret-like pinnacles. This tradition was continued into the Soviet period with buildings such as the Academy of Sciences where the arcades are decorated with pseudo-epigraphic brickwork.

See also: Central Asia, Merv

Further reading:

Ukhaidhir

*Early Abbasid palace in the desert of south-western Iraq.*

The palace stands in the desert west of the city of Kerbala and east of the oasis of Shithatha. The building is made out of rough-hewn limestone blocks and mud plaster with baked brick used for roofing vaults, resembling earlier Sassanian structures (cf. Kharana in Jordan). The palace may be divided into two structural phases, a central palace core and an outer enclosure wall added slightly later. The exterior curtain wall is composed of tall blind niches alternating with solid semi-circular buttress towers. On top of the wall there was a parapet which was cantilevered over the niches allowing a continuous series of slits (machicolation) which could protect the lower parts of the wall from attack. The main gateway is set between two quarter-round towers and contains a slot for a portcullis. To the right of the entrance on the outside there is a large stable block. The central core of the palace contains a mosque, a bath house and a main reception hall. The upper floor is reached by ramps running up at right angles to the axis of the main gateway. There are small tunnels running over the main vaults which provided cooling and ventilation.

Recent survey work in the vicinity of Ukhaidhir has demonstrated the development of the area during the early Islamic period, starting with the small palace at Tulul Ukhaidhir several kilometres to the north of the main palace. In addition there is an outer mud-brick enclosure containing a variety of mud-brick buildings which are now only visible as humps.

**See also:** Abbasids: Atshan, Khan; Iraq; Sassanians

**Further reading:**

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Plan of Ukhaidhir Palace, Iraq (after Mehdi)
ulu cami
Turkish term for a congregational or Friday mosque.

Umayyads
The dynasty of Umayyad caliphs was based in Syria and ruled the Islamic world from 660 to 750 CE.

Under the Umayyads the Islamic state was transformed from a theocracy to an Arab monarchy. In 661, Ali, the last Orthodox caliph was murdered and Mu'awiya, the governor of Syria, became the first Umayyad caliph. Mu'awiya provided the centralization essential for the survival and continuing expansion of the Arab Empire. At its height Umayyad rule extended from the Atlantic coast of North Africa to India and from Central Asia to the Yemen. The administration of conquered provinces was usually left intact, so that the tax accounts for Syria, for example, continued to be kept in Greek. Socially, however, Umayyad rule was characterized by the domination of Arabs.

The success of the Umayyad caliphate carried within it the seeds of its own destruction. Because the economic and social structure of the empire was dependent on the conquest of new lands, any setbacks or reverses caused resentment and dissatisfaction throughout the regime. Similarly the secular nature of the dynasty aroused opposition amongst those in favour of a more theocratic state. In 747 a revolution against the Umayyads began in Khurassan and soon spread throughout the eastern part of the empire. By 750 the Umayyad regime had been defeated to be replaced by the Abbasids who ruled from Iraq. Only one branch of the Umayyads survived by fleeing to Spain where the dynasty continued to rule until 1051 CE.

Almost all surviving Umayyad monuments are in Syria and Palestine whence the dynasty derived most of its support. As the Arabs did not have an architectural tradition suited to the needs of a great empire, they adopted the building methods of the defeated Sassanian and Byzantine empires. Because they ruled from Syria, Byzantine influence was stronger, although Sassanian elements became increasingly important. In many cases Byzantine or even Roman buildings were simply taken over with little or no modification. However, the conquests did provide some innovation both in terms of building types and in the prominence given to decoration.

The most important building projects undertaken during the Umayyad era included mosques, palaces and cities. Mosques were obviously an important element in the expansion of the Islamic state although the speed of the conquests meant that these were often temporary structures or converted churches. New cities were built in answer to specific requirements, such as the need for an administrative centre rather than for dynastic propaganda as in the Abbasid period. The most characteristic type of building is the 'Desert Palace' built as a residence for the ruling élite.

The earliest Islamic cities were garrison towns such as Basra and Kufa, built as centres for the conquest of Khurassan and Central Asia. The Umayyads continued this policy of building cities which were little more than giant military camps, although significantly these were not fortified. The most important city of this type was Wasit built in 701 by Yussuf ibn al-Hajjaj the Umayyad governor of Iraq. Architecturally these cities were important because they were divided according to tribal groups, each with its own masjid, which prefigures similar divisions in later Arab cities. Trade was also a powerful stimulus for the foundation and growth of cities in the early Islamic period. The frontiers of the Islamic state were particularly conducive to the growth of cities in North Africa and in eastern Iran military camps quickly grew into trading cities.

Mosques were an essential part of early Islamic government as they provided a meeting place at which important announcements could be made. Early on two separate mosque-building traditions developed; in Syria this was based on the conversion of churches whilst in Iraq mosques developed out of square enclosures used for prayer. The earliest Iraqi mosque for which we have archaeological evidence is the Friday mosque at Wasit built to a square plan with a hypostyle roof. The oldest Islamic building in the west is the Dome of the Rock built by Abd al-Malik in 691. However, this building is a sanctuary rather than a mosque and its influence on later Islamic architecture is limited.

More important in terms of mosque development is the Great Mosque in Damascus built by the caliph al-Walid in 705 CE. This building is modelled on Syrian churches, which after the conquest were used as mosques. Churches were converted to mosques by blocking up the west door.
and piercing the north wall with doorways, creating a building with a lateral axis perpendicular to the direction of prayer. Mosques built in the same style as Damascus include Qasr al-Hayr, Qusayr Hallabat, Raqqa, Balis, Diyarbakir and Der'a. Other developments in religious architecture in the Umayyad period include the introduction of the mihrab and the minaret.

In secular building the most important constructions of the Umayyad period were the desert palaces of Syria and Palestine. Some of these buildings were new foundations, whilst others were Roman or Byzantine forts converted to meet the needs of the new Arab rulers. Significantly, most of these buildings were abandoned soon after the fall of the Umayyad regime and they remain as monuments to the wealth and tastes of the dynasty. Their size and scale vary enormously, from the small and lavishly decorated bath house of Qusayr Amrah at the great fortified city-palace of Qasr al-Hayr al-Sharqi. From the outside most of these buildings resemble fortresses; thus the main entrance of Qasr al-Hayr al-Sharqi is protected by two tall semi-circular towers and a machicol. In some of the palaces the effect of the fortifications is softened by great decorative friezes, as at Mshatta, Qasr al-Hayr al-Gharbi and Khirbet al-Mafjar. Most of these palaces include a bath house and a mosque as well as living accommodation arranged according to the bayt system. Each palace comprised a number of bayts, each of which would house a family or tribal unit. There is very little differentiation between the rooms within each bayt, so they were probably used simply as shelters in a similar manner to a bedouin tent with no permanent fixtures.

The building techniques employed by the Umayyads were as diverse as the regions they conquered, so that major projects would employ workmen of several different nationalities. At its most conservative Umayyad architecture is indistinguishable from either Byzantine or Sassanian work but usually there is a combination of eastern and western elements which produce an unmistakably Islamic building. One of the best examples of this mixture is to be found at Mshatta where the walls are of cut stone in the Syrian tradition, the vaults are constructed in the Mesopotamian fashion and the decorative carving is a mixture of Byzantine and Coptic motifs.

The most common building materials used in this period were stone, wood and brick. In Syria the majority of buildings were constructed out of cut stone or ashlar masonry. The quality of Umayyad masonry is generally very high with sharp edges, tight joints and large blocks producing buildings with a monumentality unsurpassed in later Islamic building. Ashlar masonry is particularly suited to the construction of large vertical surfaces which can be enlivened by carving, as on the entrance façade at Mshatta. With the exception of basalt most stone is unsuitable for roofing large areas and only small spans could be roofed with barrel vaulting. In general Umayyad architecture avoided the problem of intersecting vaults so that most buildings were either made up of small units or roofed in wood.

In Syria, timber from the forests of Lebanon was often used for roofing. Roofs were either shallow, pitched structures supported by wooden trusses, as in the Great Mosque of Damascus, or occasionally wooden domes, as in the Dome of the Rock or the Aqsa Mosque. Timber was also used for centring, scaffolding, tie-beams and mosque furniture such as minbars.

Although brick architecture was common to both the Byzantine and Sassanian empires its use in Umayyad architecture was limited to the eastern part of the empire. The availability of suitable stone in Syria meant that bricks were rarely used there even in Byzantine times. When bricks were used in Syria it is significant that the Mesopotamian style was used with thin joints, rather than the thick layers of mortar used in the Byzantine tradition. Examples of this are found at Qasr al-Tuba and Mshatta. In Iraq both baked brick and mud brick were used extensively. Often baked brick was used for pillars, vaults and the lower courses of walls whilst mud brick was used for the upper parts. Examples can be seen at Wasit and Usqaf Bani Junayd.

Umayyad architecture can be distinguished from that of earlier periods by its use of decorative techniques. None of these was new but the variety and scale of decorative effects was far greater than ever before. The most important decorative methods employed were mosaic, wall painting, sculpture and relief carving.

Although it is probable that most Umayyad mosaics were made by Byzantine craftsmen, the motifs used and the choice of designs usually indicate an Islamic influence. The earliest Islamic
mosaics are those in the Dome of the Rock, which consist of gold and polychrome tesserae in representations of Byzantine and Sassanian royal jewels. The Great Mosque in Damascus contains a very important group of mosaics depicting an ideal city which, significantly, is devoid of people. This is due to the ban on figural representation in mosques and is a good example of Byzantine art adapted for Islamic purposes. Even in the desert palaces mosaics usually avoided figures, although occasionally, as at Khirbet al-Mafjar, there are representations of animals.

In addition to floor mosaics most Umayyad palaces were decorated with frescoes, usually on walls, although occasionally on floors, as at Qasr al-Hayr al-Gharbi. The best preserved paintings are those at Qasayr Amrah which include representations of a great hunt, half-naked dancing girls and a famous portrait of six rulers of the world.

Sculptures are found at a number of desert palaces, most notably Khirbet al-Mafjar and Qasr al-Hayr al-Gharbi. Both eastern and western sculptural traditions were used, although the medium was usually stucco rather than stone. Because stucco is not free-standing, sculptures were usually incorporated into some structural feature of a building such as the entrance.

See also: bayt, masjid, mihrab, minaret

Further reading:

**United Arab Emirates (UAE)**

Federation composed of the seven emirates of Fujairah, Ajman, Ras al-Khaimah, Abu Dhabi, Dubai, Umm al-Quwain and Sharjah. The country previously known as the Trucial Coast is located on the Arabian side of the Gulf between Qatar and Oman. The eastern part of the country bordering on Qatar and Oman is mountainous whilst the western part is flat sandy coastal plain.

The traditional materials of construction in the emirates are coral, mud brick, dry stone and wood and thatch. Coral obtained from the coastal reefs is the prime building material on the coast. Two forms are used, irregular rubble blocks set into a thick mortar known as ‘sarooj’ and thin coral slabs used as panels between load-bearing pillars. Mangrove wood obtained from East Africa is used both as strengthening for walls and for roof beams. The maximum length of mangrove poles is 3.5 m which imposes a rigid geometry on the coastal houses. Ceilings resting on the mangrove beams are made of planks of date-palm wood and are sometimes painted.

In oasis towns, such as al-Cain on the Omani border, houses are built out of mud brick with split-palm beams used for roofing in a manner common throughout the Arabian peninsula. Often the lower parts of the walls are built from large stone blocks to strengthen the buildings against water and wind erosion. The most ephemeral buildings are those built of palm fronds and wood, although it is likely that in the past these may have been the commonest form of dwelling. Palm-frond, or barasti, houses are usually built on a wooden frame made out of mangrove poles, split-palm trunk or any other available wood. The palm fronds are used in two forms, either as straight poles (approximately 1 m long) stripped of their leaves used for creating screens or with the leaves still on for roof thatch. The shape of palm-frond houses varies from square or rectangular flat-roofed buildings to triangular tent-like structures.

In the mountains in the east of the country houses are built out of irregular-shaped blocks laid without mortar; inside, the walls of the houses may be plastered with mud. The flat roofs are made out of palm fronds or any other locally available wood. Sometimes the houses are built into the ground, with triangular pitched roofs made of palm wood. Most of the stone houses are rectangular, although in the central mountains of the UAE round stone houses are also found, with roofs made of mountain bushes.

Before the twentieth century the emirates depended on trade and fishing for their primary income. Each town was located on a creek or peninsula with easy access to the sea and a hinterland used for agriculture. The most famous of these towns (now disappeared) is Jufar which had extensive trade links with East Africa, India and the Far East during the seventeenth and eighteenth centuries. The location of the emirates on the coast

...
of the Gulf has also meant that the country was heavily influenced by its neighbour Iran. This influence can be seen in the Bastakia quarter of Dubai which developed as an outpost of the Iranian city of Bastak. Today the Bastakiya quarter is notable for its wind-towers, which are a characteristic feature of central Iranian towns.

There are few old mosques standing in the UAE and those that do survive are mostly in the smaller villages. This is because the larger mosques of the towns have undergone constant renovation and renewal so that the main mosques are now dazzling new structures. Reputedly the oldest mosque in the emirates is the mosque of Bidiya on the east coast near the site of the battle of Dibba which established Islam in the area. This mosque is a rectangular building with a large central pillar supporting four flat-topped domes with pointed finials. The deep-set mihrab projects out of the back of the mosque and is flanked by a fixed minbar of four steps. Until recently minarets were fairly unusual in the UAE although in the east there are a number of small coastal mosques with squat minarets capped with unusual pointed domes.

Like many of the other countries of the Arabian peninsula the emirates have a number of forts and watch-towers built to protect the urban populations. Each of the seven emirates had its own forts which are now in varying states of repair. The oldest of these is the Husn of Abu Dhabi originally built in the eighteenth century to protect the city's well. The emirate of al-Cain has six forts built by the Nahyan family around the Buraimi oasis between 1830 and 1910. Most of the forts have now been restored and converted into museums.

The most sophisticated houses in the UAE are found in the coastal towns where there was enough wealth and outside influence to build on a large scale. The typical house of a wealthy coastal family consists of a two-storey structure built around a central courtyard. From the outside the houses are generally quite plain, although sometimes the upper parts of the walls were decorated with crenellations and the wind-towers were decorated with elaborate arches. Inside, the rooms opening on to the courtyard were decorated with carved stucco panels or grilles, sometimes containing stained glass.

The phenomenal growth of the emirates since
Defensive tower, UAE. Note lower part of tower is filled with sand (after Kay and Zandi).

The Second World War has meant that many of the older historical and traditional buildings were destroyed. In recent times, however (since the 1970s), there has been a concerted effort to protect and restore historical buildings. One of the most successful projects has been the restoration of the abandoned nineteenth-century palace of Sheikh Saeed, ruler of Dubai from 1912 to 1958. The present architecture of the UAE represents a wide variety of Islamic styles indicating both the wealth and cosmopolitan nature of the country.

See also: Bahrain, Oman, Qatar

Further reading:
of Baghdad). This can be seen in the numerous cinemas built in the Moorish palace style with names like the Alhambra. The most complete examples of this Islamic fantasy architecture is the city of Opa-Locka conceived as 'the Baghdad of south Florida'. The buildings have horseshoe-shaped windows, minarets, domes and crenellations. The most important building is the city hall, built as a fortified citadel with thick crenellated enclosure walls. This building is covered with five large domes and framed by four minarets (three small cylindrical towers and one huge octagonal tower). Other Islamic-style buildings in the city include the railway station, the archery club, the archaeological museum and the Opa Locka hotel.

The discovery of the New World and the expulsion of Muslims from Spain occurred in the same year, 1492. The result was that a large number of Muslims converted to Christianity and emigrated to the New World where their skills were used in the development of New Spain. Mudéjar (forced Muslim converts to Christianity) style architecture in America is found mostly in Mexico and Central America, although it can also be seen in the south and west of the USA in Texas, New Mexico and California.

See also: Mudéjar, Spain

Further reading:

Urgench

Ancient capital of Khorezm in western Uzbekistan.

Urgench was established as the Mongol capital in the early fourteenth century. The most prominent remains at the site is the tomb of Turabek Khanum dated to 1320. This has a massive portal with a muqarnas vault. Outside, the tomb has a polygonal plan whilst the interior is hexagonal.

Uzbekistan

Independent Central Asian Republic with a predominantly Muslim population.

Uzbekistan occupies a vast area between Afghanistan, Turkmenistan and Kazakhstan; most of this area is desert, semi-desert or steppe. The main areas of occupation are the western area of Khorezm, where the river Amu Dar'ya enters the Aral Sea, and the cities of Bukhara and Samarkand on the Zeravshan river. The population of the Republic is predominantly Uzbek (Turkic) although Persian was the main language in the early Islamic period.

The main source of prosperity for this region is the trans-continental trade route between China, India, the Middle East and Europe known as the Silk Route. The trade led to the establishment of urban centres on the edge of the deserts of Central Asia. From the second century this trade was controlled by the Kushans, a semi-nomadic people from Chinese Central Asia. The Kushans built up a vast empire which controlled most of the trade passing through Central Asia. In the fourth century the Sassanians took control of the western part of the trade routes and reduced the Kushans to a series of independent principalities. The central part of the route was controlled by the Soghdians who occupied Samarkand and Bukhara. The first Arab raids occurred in the mid-seventh century, although it was not until the beginning of the eighth century that any real conquests were made with the capture of Bukhara and Samarkand. By the mid-eighth century most of the region was under Arab control. By the ninth century a Persian dynasty known as the Samanids was in control of both Bukhara and Samarkand. The Samanids were nominally vassals of the Abbasids although they acted independently. During this period Islam gradually replaced Buddhism, Manicheanism and Zoroastrianism as the main religion of the area. At the end of the tenth century the Samanids were replaced by the Karakhanid Turks who established Samarkand as their capital. During the eleventh century the Seljuk Turks rapidly expanded westwards from their base in the region of Khorezm in western Uzbekistan. The region of Khorezm was left under the rule of the Khorezmshas who were vassals of the Seljuks. In 1077 the Khorezmshas declared themselves independent, establishing their capital at Urgench. By the twelfth century the Khorezmshas had gained control of most of Central
Asia. This period of great prosperity was interrupted by the Mongol invasions of the early thirteenth century. The earliest period of Mongol rule in the region was not characterized as successful, although under the Timurids in the fourteenth and fifteenth centuries it entered one of the most brilliant periods of history. In the sixteenth century the region was conquered by the Uzbeks who now form the majority of the population.

The main building materials are mud brick and pisé, baked brick and wood. Stone is generally not available for use as a building material. In addition to the fixed buildings temporary or mobile dwellings (yurt) are made of felt over a wooden frame. For traditional houses throughout the region mud brick and pisé are most commonly used. Some of the best examples of mud architecture are the fortified walls which surround most settlements from small villages to major cities such as Bukhara. Important buildings such as mosques, madrassas and mausoleums were sometimes built of baked brick. In pre-modern times the standard brick form was a square tile 5–7 cm thick. These were used in a variety of decorative patterns produced by placing bricks in alternating groups vertically and horizontally. From the twelfth century glazed bricks were used and eventually became common in the fifteenth century under the Timurids. Although wood has always been rare, especially in the eastern parts of Uzbekistan, it was used for roofs and occasionally for columns, especially in mosques and palaces. Some of the best examples of wooden architecture are in Khiva and include carved wooden columns with muqarnas capitals and bulbous lotus bases resembling lotus buds. Wooden ceilings are often painted.

The majority of Islamic monuments in Uzbekistan are found in Bukhara and Samarkand whilst Khiva is a good example of traditional nineteenth-century architecture. Outside these cities the most important monuments in the country are at Shahr-i Sabz, the village which Timur tried to make his capital.

See also: Bukhara, Samarkand, Shahr-i Sabz, Timurids
wakala
Urban building combining the functions of khan, warehouse and market.

waqf
A charitable endowment often intended for the upkeep of a religious building, educational establishment or hospital.

Wasit
Capital of Iraq during the Umayyad period.
Wasit lies south-east of the modern town of Kut in southern Iraq. It was founded in 701 CE by al-Hajjaj, governor of Iraq, as a garrison town to replace Kufa and Basra which had been demilitarized after a revolt against the Umayyads. In 874 another Friday mosque was built by the Turkish general Musa ibn Bugha in the eastern part of the city. The devastation wrought by the Mongols in the thirteenth century and by Timur in the fourteenth hastened the decline of a city that was no longer on the main trade routes due to a change in the course of the Tigris.

The first mosque on the site was built by al-Hajjaj in 703; measuring 100 m per side, it was located next to the governor's residence. Iraqi excavations revealed two superimposed mosques, the earlier of which had no mihrab. This confirms the early date of the mosque, as the first concave mihrab was introduced by al-Walid in 707–9 in the mosque of Medina.

There are also the remains of a thirteenth-century madrassa on the site, consisting of a monumental portal flanked by twin minarets with fluted brick decoration.

West Africa
Region of Africa comprising the modern states of Mali, Mauritania, Senegal, Niger, Nigeria, Cameroon, Burkina Faso, Guinea and Ghana.

Known to medieval geographers as the Sudan, this area extends from the Sahara desert in the north to the mouth of the Niger river in the south, and from Atlantic in the west to Lake Chad in the east. The region was subject to the influence of Islam from the eighth or ninth century onwards and by the nineteenth century large areas were Islamicized.

West Africa can be divided into four main zones, the Sahara, the Sahel, the Savannah and the rain forests. The largest zone is the Sahara desert which extends from the Atlas mountains in Morocco and Algeria to the Senegal river. Until recent times the vast dunes and extreme temperatures of this desert have formed an impenetrable barrier to all except the nomadic tribes which inhabit the area. South of the desert is band of semi-arid country known as the Sahel (Arabic for 'coast') where there is an intermittent vegetation of scrub and occasional small trees. Below this is the Savanah region characterized by a rich growth of grass and plentiful seasonal rainfall. Further south near the coast, especially in Nigeria, Benin, Togo and Ghana, are the dense rain-forests. In recent times the area of the Sahara and the Sahel have been increasing at the expense of the Savannah, probably due to human activity. The best example of this phenomenon is the area occupied by the empire of Ghana which in medieval times was rich grassland and is now desert.

History
The means by which Islam penetrated into West Africa was via the trade routes from North Africa. The main goods involved in the trade included gold, slaves, ivory and gum from West Africa and manufactured goods from the Mediterranean area. This trade was a continuation of pre-Islamic Roman and Byzantine trade routes and was in the hands of the Berber tribes of the Sahara. Already by the end of the seventh century there are accounts of Muslim traders from North Africa and Egypt in the markets of the Sudan. By the end of the eighth
century the northern part of the trade was controlled by the semi-independent Berber dynasties of the Rustamids in Morocco and the Idrisids in western Algeria. These dynasties controlled the northern termini of the West African routes at Sijimassa and Tahert and were able to collect taxes from this lucrative trade. It was this trade which was one of the motivating forces behind the rise of the Fatimids in North Africa. With the support of Berber tribes the Fatimids gained control of most of North Africa in the ninth century and by the tenth century were in a strong enough position to take control of Egypt, Africa's wealthiest province.

The role of the Berbers in the dissemination of Islam amongst the peoples of the Sudan was critical, particularly in the area of present-day Mauritania. The Berbers in this area are known as the Sanhadja or Muthalamin and were the ancestors of
the Almoravids who invaded Spain in the eleventh century. They comprised three main tribal groups, the Lamtuna, Massufa and Godala, who were allied into a loose confederation. The most prominent of these groups was the Lamtuna who arrived in the area in the eighth century and captured the oasis city of Awdaghast in Mauritania. By the tenth century most of the Sanhadja leaders had adopted Islam which they used to wage a jihad against the southern kingdoms.

The southern part of West Africa below the Sahel was dominated by the three great empires of Ghana, Mali and Gao. Each of these empires was composed of a particular language group; thus Ghana was controlled by Soninke-speaking people, Mali by Manding peoples and Gao by Songhay people. These were not empires in the modern sense but rather confederations of language and kinship groups which owed allegiance to a central ruler whose capital was often mobile. The empires are difficult to define in territorial terms as they had differing degrees of control over different peoples over a wide area. The key to the rise and fall of these empires was the control of the gold trade with North Africa.

Ghana controlled an area roughly equivalent to south-eastern Mauritania and south-western Mali and flourished between the ninth and eleventh centuries. During this period Ghana was the main opposition to the Sanhadja Berbers of western Mauritania and in 990 captured the Berber city of Awdaghast. Although it was a pagan country...
there were large numbers of Muslims in Ghana's administration and by the eleventh century the capital was divided into two cities, a Muslim city and a pagan royal city. In spite of this the Almoravid Berbers launched a jihad against the empire and in 1077 destroyed the capital and forced the survivors to convert to Islam. A reconstituted kingdom of Ghana managed to survive until 1240 when it was incorporated into the empire of Mali.

The rise of Mali was due to a number of factors including the decline of the empire of Ghana and the discovery of a new oriferous (gold producing) region on the Niger river. The Mali Empire was formed by the unification of two groups of MANDING peoples in the thirteenth century, and was located south of Ghana on the banks of the Niger, although it later took control of much of the former empire of Ghana. Unlike Ghana’s, the ruler of Mali was a Muslim although most of the people within the empire remained pagan. The most famous of Mali’s rulers was Mansa Musa who made a pilgrimage to Mecca in 1324 during which he gave away large quantities of gold. By the end of the fifteenth century Mali was in decline due to the devastating effects of rival claimants to the throne, a shift in trade patterns and increasing attacks from the Tuareg and Mossi. The empire which grew to replace the power of Mali was the Songhay Empire of Gao, with its centre on the banks of the Niger in the east of the modern state of Mali. Gao had a long history stretching back to the ninth century when it was an important kingdom on the route to Tahert in Algeria and Ghana and Sijilmasa to the west. By the ninth century the ruler of Gao was Muslim, although it is probable that this was merely one of the king’s religions. During the thirteenth and fourteenth centuries Gao became subject to the empire of Mali; when this declined at the end of the fourteenth century Gao began taking over some of the outer dependencies of Mali. By the end of the 1460s Ali, the founder of the Songhay Empire, had taken Djenné and Timbuktu thus gaining control of some of the principal trading towns of the Sahel. Ali was succeeded by Askiya Muhammad who consolidated his territorial conquests and introduced Islam as the state religion. The empire flourished for the next hundred years until the Moroccan conquest of 1591.

In addition to the medieval empires which dominated West Africa there are a number of trading cities on the border of the Sahara desert which, although sometimes incorporated into empires, were essentially independent. The most important of these cities were, from east to west, Oualata, Timbuktu and Agades. Oualata in western Mauritania rose to prominence in the thirteenth century after the collapse of Ghana when it was populated by refugees from Awdaghast and other cities. The city was predominantly Ibadi with a mixed Arab Berber population and was one of the principal towns trading with Sijilmasa in Morocco. Further west, in the modern state of Mali, is the famous city of Timbuktu, established as a nomadic Tuareg encampment in the twelfth century. During the fifteenth century under Songhay rule the city became the principal intellectual and religious centre in West Africa. The city has a mixed population of predominantly Berber origin although there are significant numbers of Soninke and Manding.

Whilst the medieval period in West Africa was dominated by the great empires the period after the sixteenth century was characterized by the emergence of smaller independent cities and kingdoms. The post-medieval period is also notable for the integration of Islam into local culture. Whereas Islam had previously been the religion of foreign traders and local rulers who adopted Islam as another attribute of kingship, it now became the religion of whole groups and villages. In the nineteenth century this was partially achieved through jahads or holy wars, but the more common method of diffusion was through the urbanized trade networks. The widespread adoption of Islam throughout West Africa meant that the nature of the religion itself was modified to conform to local ritual requirements. In most cases this meant that local rituals and cultures were adapted to serve Islamic requirements, although in other cases (such as among the Ashante) this meant the adaptation of Islamic forms for use in essentially pagan societies.

Islamic West Africa south of the Sahel can be divided into two main language groups, the Mande-speaking peoples of Mali, Burkina Faso, Ivory Coast and Ghana, and the Fulbe-speaking peoples of northern Nigeria and Futa-Djallon in Guinea. The Mande-speaking peoples occupy roughly the same area as the empire of Mali, although the main cities of the post-medieval era are further east than the old capitals of Kangaba and Niani. The main Manding cities are Mopti, Djenné, Ségou, Bobo Dioulasso, Wa and Kong,
West Africa

each of which functioned as independent or semi-independent states in the eighteenth and nineteenth centuries. The most famous of these cities is Djenné whose origins may be traced back to the thirteenth century. Although the city did not rise to prominence until the sixteenth century, by the nineteenth century it was one of the main towns in West Africa. Less well known but equally important in the propagation of Islam was the city of Kong established by immigrants from Ségou and Djenné in the eighteenth century. Kong was located further south on the edges of the equatorial forest (present-day Ivory Coast) and developed as a centre of Islamic scholarship and commerce for the surrounding area.

The Fulbe-speaking people occupy two distinct areas either side of the area dominated by the Mande peoples. First to be settled by Fulbe-speaking people was the Hausa area of north Nigeria where they arrived as Muslim clerics in the fifteenth century. Hausaland already had an established, partially Muslim, society dating from the beginning of the eleventh century, comprising seven independent city-states. These cities, known as bakwoi, were Dauro, Kano, Gobir, Katsina, Zaria, Biram and Rano. Kano and Katsina already had an Islamic tradition and it was these cities that the Fulbe developed into a seat of Islamic learning and culture. Although Hausaland was subjected to subsequent waves of influence, most notably Songhay rule in the sixteenth century and large-scale immigration from Agades in the eighteenth, the Fulbe continued to arrive both as clerics and pastoralists. In the nineteenth century the urbanized Fulbe instigated a jihad for Islamic reform in the Hausa states. The result was a new state based on the recently founded capital of Sokoto, known as the Sokoto caliphate. The success of the Sokoto caliphate encouraged Fulbe in the neighbouring region of Adamawa (present-day Cameroon) to carry out a similar jihad from their newly established capital of Yolo. The jihad was similarly successful and Adamawa was eventually included within the Sokoto caliphate.

Two thousand kilometres further west is the other area of Fulbe domination in the Futa-Djallon region of Guinea. The early Fulbe migrations into this area were peaceful and were accompanied with intermarriage with the native Djallonke people. From the late seventeenth century onwards there was an intensification of the immigration until the eighteenth century when it was organized into a jihad. By the end of the eighteenth century Fulbe control of the area was complete with a capital established at Timbo.

Architecture

The Islamic architecture of West Africa reflects the complexities and diversities of its history as well as the differing natural environments. In the past, analysis of the architecture of the area has tended to concentrate on the influence of North Africa and the Middle East rather than to examine the indigenous cultures and architecture of the area. Three main sources of influence were identified each of which ignored the possibility of local invention or development. The most far-fetched idea was that the monumental architecture of the region was developed from the dynastic architecture of Egypt and was transmitted by the migration of Songhay people from the upper Nile to the Niger. The second explanation attributes the entire West African architectural tradition to the Andalusian poet and architect al-Saheli who accompanied Mansa Musa on his return from the Hajj in 1324. Whilst there is some information that al-Saheli did design an audience hall it is unlikely that this or any other work he may have carried out created an architectural style for the whole region. The third suggestion is that the Moroccan invasion of 1591 was the primary influence on the subsequent architecture of the region. Whilst the Moroccan invasion was certainly accompanied by builders and craftsmen and may have had some influence this was not sufficient to create a complex and distinct architectural style. More recently scholars have emphasized the architectural styles and beliefs of indigenous pagan cultures as influences on the later Islamic architecture of the region.

A wide variety of building materials and techniques are used over this vast region. The techniques are largely defined by the material, which may be grouped into three basic types, stone, mud and wood. Stone predominates in the western Sahara and Sahel and tends to be associated with Berber architecture. The best examples of stone cities are found in Mauritania at sites like Chinguir, Oudan, Tijika, Qasr el Barka and Tichit. Excavation has shown that Koumbi Saleh, the capital of ancient Ghana, and its sister city Awdaghast were also built of stone. Many of these sites were originally
founded as ribats, although they later grew into large trading cities. The commonest method of building in stone in the area uses split limestone in dry-stone wall constructions. The limestone used in the buildings comes in several colours from green and yellow to rose, depending on local availability. The outer faces are usually left unplastered although at Tichit the inner surfaces are coated in clay and a mud mortar is used for some of the walls (at Oualata both the inner and outer surfaces are covered in mud plaster). A characteristic feature of this masonry is the use of triangular niches sometimes arranged to form composite triangular features. Also common are projecting corbels, bands of triangular niches forming chevron patterns and battered walls. The roof and ceilings are usually built of split date-palm trunks arranged diagonally over the corners, forming a square shape in the centre which is then covered by further split-palm beams arranged longitudinally. Above the beams, is placed a woven matting of split palm fronds, on top of which a layer of earth is spread. Although in the cities the buildings are built to a rectangular or square plan, many of the buildings in villages are built with a round plan or with rounded corners. Even in Chinguit itself many of the houses are built with the external corners rounded off.

Whilst stone is the building material of the western Sahara, mud is the characteristic building material of the southern Sahel and the Savannah areas. Sometimes mud is used in combination with stone as at Timbuktu and Oualata, suggesting either the integration of two cultural traditions or the interface between two different environments. At Oualata the buildings are essentially dry-stone constructions covered with layers of mud plaster which serve no structural function. The effect of the mud-plaster coverings is to make the buildings look like mud-brick structures suggesting a cultural tradition originating from the southern Savannah regions grafted on to an existing Berber architecture. This suggestion is strengthened by the make-up of the population, a mixture of Berber and Soninke people. Inside the houses of Oualata, the areas around doorways and niches are decorated with brilliant white wall paintings in the form of arabesque medallions. The use of the mixture of mud and stone at Timbuktu is very different from the practice at Oualata; thus the buildings have a rubble-stone core held together by mud mortar and plaster. The quality of the stones used at Timbuktu mean that it would not be possible to build houses solely out of stone, thus the mud plaster and mortar here perform a structural function whilst the stone is used for strength. In many Timbuktu houses exposed limestone is used for corner quoins and door jambs and the building of any house starts with the laying out of four corner stones. The decoration of buildings at Timbuktu suggests a close relationship with the stone-built Berber cities of Mauritania; thus the triangular niches and chevron bands are here executed in mud brick. This architectural similarity is paralleled in the ceilings and roofs which employ the same method of diagonally split palm beams. The preference for stone architecture is most clearly expressed on the interior of the oldest part of the Djingueré Ber Mosque where round ‘Roman’ arches made of dressed limestone are used to support the roof. The distinction between stone and mud-brick architecture in Timbuktu is observed by the builders who are divided into two castes depending on which material they use. It seems likely that there was a pre-existing mud-architecture tradition in the area which was developed by the incoming Berber population who were unable to find their normal building materials. The city of Agades was founded as a Berber city and one might expect it to be built of stone especially as the surrounding Berber villages consist of rectangular stone structures with Oualata-style ceilings. However, the city itself is made almost entirely of mud and resembles the Hausa architecture of north Nigeria. The reason for this could perhaps be attributed to the city's abandonment in the eighteenth century and it should be noted that a sixteenth-century traveller described the city as built in the Berber style. The subsequent rebuilding of the city in the nineteenth century was by people from north Nigeria which may explain its close relationship to Hausa architecture.

Mud either as brick or as pisé is associated with the greatest examples of West Africa's monumental architecture such as the mosque of Djenné or the minaret of Agades. The area most suited to mud-brick architecture is the Savannah region where there is enough water to make bricks, plaster and pisé yet not too much rain to dissolve the dried mud walls. Mud architecture lends itself to the creation of plastic sculptural forms on fairly simple structures, thus a simple rectangular façade can be
enlivened by the addition of crenellations, engaged pillars and decorative panels. The traditional methods of mud architecture vary from one town to another; thus in Djenné cylindrical mud-bricks are used whereas in other towns simple dried-earth lumps will be used as the building material. Stylistically there are two main groups of mud architecture, a western tradition originating in the Manding cities of modern Mali and a more easterly tradition in the Hausa cities of north Nigeria.

The western style, often referred to as the 'Sudan style', can trace its origins to the city of Djenné in Mali. This architecture is characterized by the elaborate decorated façades of houses which emphasize verticality by the use of crenellations, engaged pillars and division into several registers. Mosques are distinguished by large minaret-like towers above the mihrab and tapering buttresses terminating in cone-shaped pinnacles. The mihrab towers are usually covered with projecting wooden stakes, known as 'toron'. These stakes were often found all around the walls of a mosque and functioned as scaffolding although they may also have some ritual significance. The most famous building in Djenné is the Great Mosque built in 1909 on the ruins of the previous mosque. It was meant to be a replica but differed considerably from the ruined original which had been recorded before its destruction. The new mosque was built with French funding and guidance from French military engineers and was used by the French as a basis for a neo-Sudanese style. Thus in 1935 the French Administration at Mopti built a new Friday mosque, using the new Great Mosque of Djenné as a model. Although the new Sudan style was based on the pre-colonial style it emphasized symmetry and monumentality at the expense of tradition and ritual.

Like the western tradition of mud architecture the origin of the eastern tradition can be traced to one main town, which in the case of Hausa architecture is Kano. Externally Hausa architecture is plainer than its western counterpart, although inside it displays a wide variety of decorative motifs. Hausa buildings are distinguished by their extensive use of wood and may be regarded as timber-frame buildings as opposed to the more pure mud-brick architecture in the west. The origins of this style are thought to derive from mat-frame tents where the mat-walls are gradually replaced with earth walls. The advantages of this can be seen in the use of one of the most characteristic features of Hausa architecture, the ribbed dome. This consists of a number of ribs converging in the centre and covered over with palm-frond matting. These domes may be set on a square or circular base producing either a single central point or a central square at the intersection of the ribs. The wooden ribs (usually acacia wood) are then plastered with mud to produce free-standing arches which are decorated with abstract designs. Flat roofs are achieved by building light mud walls on top of the ribs between the centre and the outer wall, making the ribs into giant armatures or brackets with a curved inner profile. South of the Hausa area in the region of Adamawa the concept of mud-brick architecture with flat roofs is modified by the use of conical thatched roofs. This adaptation is necessary in a region where high rainfall makes flat roofs impracticable. One of the more interesting results of this is that in order to preserve the appearance of an Islamic rectangular or square house façades are built on to the front of thatched buildings. These stage-like façades built of mud are enlivened by the use of elaborate arabesque designs above projecting doorways.

Further west, in the Futa-Djallon region of Guinea, wood and thatch replaces mud as the main building material. The buildings of this region consist of circular huts covered with huge conical thatched roofs supported by large central poles. The lower part of the roof is supported by shorter poles contained within a circular outer wall. The eaves of the thatched roof project beyond the line of the outer wall so that from the outside the walls and entrances are barely visible. Mosques in the region are built in the same manner as the houses, but inside the hut there is a flat-roofed rectangular mud-walled building with a mihrab in the east wall. According to local tradition the mosque is only the square building inside whilst the outer thatched building is merely for protection. This arrangement further strengthens the idea that in West Africa Islam can only be represented by rectangular or square architecture of mud or stone.

Further reading:
Yasavi (Shrine of Ahmed Yasavi)

Shrine built by Timur for his son Jahangir between 1397 and 1399.

The shrine is located in the city of Turkestan (modern Yasi) in the Republic of Kazakhstan. The building is oriented north-south on a rectangular ground plan (65.5 by 46.5 m) with portals at the south and north ends. The main doorway is the magnificent south portal which is flanked by huge cylindrical corner towers or minarets over 20 m high. Behind the portal is the dome of the prayer hall rising to a height of over 37 m. At the other end of the structure is the north façade in the centre of which is the entrance to the mausoleum. The mausoleum is capped by a tall 'melon-shaped' ribbed dome set on a high cylindrical drum. Externally the building is well articulated with its two entrance façades, domes and an extensive covering of tilework. Internally, however, there is less feeling of unity beyond the principal rooms: leading off from the prayer hall and mausoleum are many smaller rooms with different vaulting systems which do not seem integrated in an overall design.

Yemen

Second largest country in Arabia located in the southwest of the Arabian peninsula.

The country comprises three main inhabited regions, the highlands, the coastal plain and the Wadi Hadramat. The mountains of the highlands are extremely high (up to 4,000 m) giving the region a moderate temperature and relatively high rainfall. The favourable climate makes this the most fertile part of southern Arabia with intensive cultivation of tropical plants in the wadis and in steep mountain terraces. The coastal plain is extremely hot and fairly arid, with little potential for agriculture; traditionally the main occupations have been fishing and trade. The Wadi Hadramat is a wide valley 160 km long which runs from west to east, roughly parallel with Gulf of Aden. The valley is very fertile with a system of dams and terraces which catch the water from the twyearly monsoon.

In pre-Islamic times Yemen was the home to advanced cultures which traded with the great civilizations of Mesopotamia, Egypt and Syria. The best known are the Sabeans who flourished between the tenth and the first centuries BCE. The Sabeans were responsible for the Marib Dam, one of the greatest engineering feats of the ancient world. In the first century BCE the Sabeans were replaced by the Himyarite clan who ruled the area until the sixth century CE. By the early sixth century Judaism had become established as the official religion as a counter to the missionary activity of the Byzantines. In 575 Sassanian interest in the country culminated in its conquest and annexation as a Persian satrapy.

The history of Yemen under the first caliphs is confused but it is clear that there was some conversion to Islam during the seventh century. During the Abbasid period (eighth to ninth centuries) there appears to have been a division with Shafi orthodox Sunnis on the coast and Zayidi Shi'a in the highlands. This division reflected older tribal rivalries and does not exactly mirror similar movements elsewhere in the caliphate. During the ninth century Yemen was ruled by a number of competing dynasties the most prominent of which were the Zayidis, the Rassids and the Yafurids. The Rassids were a dynasty of imams claiming descent from the prophet and they continued to rule parts of the country until 1962. In 1174 Yemen was conquered by the Ayyubids seeking a haven from the turmoil of northern Arabia brought about by the Crusaders. In 1230 Nur al-Din 'Umar the deputy of the Ayyubid ruler declared himself independent and started a new dynasty known as the Rasulids, who ruled until the mid-fifteenth century when they were replaced by the Tahirids.

The Tahirids remained in power till the early sixteenth century when increasing European interest in the area resulted in two successive invasions.
by Muslim powers determined to prevent a Christian presence in the land of Islam. The first invasion by the Mamluks was of short duration and achieved little. A year later after their defeat of the Mamluks the Ottomans launched an invasion and by 1547 they were established in the capital, San’a. Ottoman rule lasted until 1602 when the Zayidi imams once again established themselves as rulers of San’a. The Ottomans invaded for a second time in 1872 and remained in at least partial control until their defeat at the end of the First World War. With the defeat of the Turks the Zayidi imams once again took power until they were deposed in 1962. The post-sixteenth-century history of south Yemen is slightly different and is dominated by the rivalry of two tribal groups, the Kathiris and the Qu’aitis.

The traditional building materials in Yemen are stone, coral, mud brick, baked brick, wood and stucco. Stone is the principal building material in the highland regions, although mud brick and baked brick are also used for the upper parts of the tall houses. The quality of stonework varies from massive dressed sandstone blocks used in the more important buildings of San’a to roughly squared blocks of stone laid in rough courses for village houses. Coral is the principal building material in coastal towns where it is used in conjunction with hard white lime plaster. Mud brick is used throughout the country but is employed to its greatest effect in the Wadi Hadramat where structures over eight storeys high are built of mud brick. Baked brick is comparatively more rare and is used for the upper parts of buildings in the principal cities of San’a and Zabid. Decorative brickwork appears to have been introduced to Yemen during the Ayyubid period (twelfth century) as can be seen from the brick minaret of the Great Mosque in Zabid. As in the rest of Arabia suitable building wood is very scarce and is usually imported from Africa or India. Yemeni woodwork is of extremely high quality and the panelled ceilings are some of the best in the Islamic world. Stucco work is also highly developed with elaborate arches, decorative panels and delicate calligraphy all executed in fine white stucco. One of the most important uses of stucco is for the elaborate windows of coloured glass which characterize Yemeni houses.

The religious architecture of Yemen may be divided into three types of building, mosques, madrassas and tombs. The earliest mosques in Yemen are cubical mosques and hypostyle halls, both of which may be directly related to pre-Islamic temple architecture in the country. The typical cubical mosque consists of a tall rectangular chamber with a flat wooden roof supported by two rows of three columns. These mosques are usually windowless, although they may have windows placed high up near the ceiling. Some of the earliest examples of this type of mosque may actually be converted temples, as seems to be the case with the mosque of Tamur restored in 1089. Hypostyle halls also appear in Yemeni temple architecture and appear to form an early mosque type. Early examples include the Great Mosque of Zabid and the mosque of Sulayman ibn Daud in Marib. These buildings differ from the early mosques of the Hijaz and Syria–Palestine which opened on to large open courtyards. The earliest example of the courtyard mosque in Yemen is the Great Mosque of San’a which traditionally was planned by Muhammad although in its present form seems to date from the time of Abd al-Malik (early eighth century).

The Ayyubid invasion of the twelfth century introduced many new features into Yemeni architecture, the most significant of which was the dome. The earliest domed mosques had a large central
dome flanked by smaller domed bays either side. Another innovation of this period is the decorative brick minaret such as that of al-Mahjam which consists of a square socle with an octagonal shaft which is faceted lower down and has a large diaper pattern on the upper shaft. A characteristic feature of Yemeni mosques of this period (twelfth to fifteenth centuries) is a domed tower-like structure marking the position of the mihrab. The Ottoman conquest of the sixteenth century introduced a new form of domed mosque comprising a large domed area with a multiple-domed portico. One of the best examples of this type is the mosque of Mustafa Pasha in Ta'iz built in 1554. Despite the Ottoman form of this building the execution is entirely Yemeni with stucco decoration and a thick cylindrical minaret.

The Ayyubids were responsible for introducing the madrasa as an architectural type, although the form in Yemen differed from that found elsewhere in the Islamic world. The main distinguishing feature is that Yemeni madrassas had no accommodation for students and teachers. Many Yemeni madrassas simply comprised a mosque with a teaching hall opposite. One of the finest examples of Yemeni Islamic architecture is the Ashrafiyya Madrasa in Ta'iz which comprises a mosque, a teaching hall, a Quran school and a library arranged around an internal courtyard. Another innovation of the Ayyubid period was the domed mausoleum which was used to commemorate deceased imams and rulers. The earliest examples date from the thirteenth century and comprise square domed structures open on three sides, the fourth side containing the mihrab. Probably the most elaborately decorated structures are the tombs of Sa'da which have extravagantly decorated domes covered with calligraphic and geometric designs executed in painted stucco.

The richness of Yemeni religious architecture is matched in the domestic architecture of the towns and some of the villages. One of the most characteristic building forms is that of the tower houses which in San'a and the highlands are built of stone and brick but in the Wadi Hadramat are extravagantly tall mud-brick structures. The external walls of these houses are normally battered, with their thickness decreasing with height. The windows are usually decorated with wooden grilles which are often plain but can become quite elaborate. In
San'a and the highlands the exterior of the buildings are also decorated with geometric brickwork and white stucco borders around the windows. The design of these buildings varies with regions and the date of construction, although they have the same basic plan. Each house has a single door which opens on to the street. Inside there is a passageway or hall opening on to various rooms of utilitarian function (storage, animal pens etc.). At the end of the hallway there is a staircase leading up to the first floor. Depending on the height of the house the living quarters may start at the first or the third floor. In the upper storeys there are bedrooms, bathrooms and pillared reception rooms which often open on to terraces. The room at the top of the house is usually a large reception hall (mufraj) with two tiers of windows. The upper row of windows in the mufraj usually comprise elaborate stucco tracery filled in with coloured glass (green, blue, red and yellow). At the top of the house are parapets, sometimes with arrow slits for defence.

See also: Hadramawt, San'a

Further reading:


R. B. Lewcock and G. R. Smith, 'Two early mosques in Yemen'.
Yeşil Cami (The Green Mosque)

Imperial Ottoman mosque in Bursa famed for its green tile decoration.

The Yeşil Cami is part of a large complex built by Sultan Mehmet and completed in 1420. The complex is one of the last in a series of royal mosque complexes in Bursa starting with the Orhania in the fourteenth century and ending with the Muradiye completed in 1447. The complex includes a mosque, madrassa, bath house, soup kitchen and the tomb of Mehmet.

The mosque is built in the Bursa T-plan style which is based on the four-iwan plan of Seljuk madrassas. In Bursa mosques the entrance iwan becomes reduced to a small entrance vestibule leaving a T-shaped building with a central courtyard flanked by side rooms (iwans) and with a large prayer hall in front. The central courtyard is covered with a dome which has an oculus, or round hole, in the roof to let in light and air. In most of the Bursa T-plan mosques the entrance is preceded by a three- or five-domed portico, which is a feature borrowed from the usual Ottoman single-domed mosque. In the Yeşil Cami, however, the portico is missing as Mehmet died before this could be added. The entrance façade of the mosque contains eight windows, one pair either side of the door on the ground floor and four on the upper floor. Each of the ground-floor windows consists of a rectangular grilled opening inset into a richly carved arched frame which itself is set into a recessed panel. Between each pair of windows there is a deeply recessed minbar with a muqarnas hood. The upper windows are set into rectangular panels and are entirely open except for a low carved balustrade. Only the two central windows are real; the other two serve no purpose except to balance the composition of the façade. The entrance opens into a small vestibule from which stairs lead up to the celebrated royal gallery. On the ground floor the vestibule opens into the domed central courtyard which is flanked on either side by small domed alcoves. To the south of the courtyard under a large arch is the domed prayer hall with its magnificent muqarnas hooded mihrab surrounded by a tilework frame.

The most noticeable feature of the interior is the extensive use of polychrome glazed tiles. Until the seventeenth century the outer surface of the domes were covered in green tiles giving the mosque its name. The tiles carry a variety of patterns including flowers, calligraphic inscriptions, geometric interlace as well as motifs executed in three dimensions like the tile bosses in the royal gallery. The tilework of the mosque is reproduced in Mehmet's tomb, which is located on a hill above the mosque.

See also: Bursa, Ottomans

yurt

Circular tent used in Turkey and Central Asia. It is made out of a portable wooden frame covered with skin or felt.
zanana
Mughal term used to describe the women’s quarters in a palace or house.

Zanzibar
Large island off the east coast of Africa; together with the island of Pemba it forms an autonomous part of Tanzania. The capital of Zanzibar is Zanzibar town and the capital of Pemba is Chake.

Zanzibar is a low-lying coral island covered with coconut palms and famed for its cultivation of spices, in particular cloves. Pemba on the other hand is a true island lying on rock away from the continental shelf. The island rises much higher out of the water and has a deeply indented coastline with many remains of ancient settlement. Remains of pre-Islamic sites have been found on both Zanzibar and Pemba although the nature of settlement at these sites has yet to be clarified.

Zanzibar has a long history of Islamic settlement starting in the eighth century at the trading site of Unguja Ukuu on the southern part of the island where a hoard of gold Abbasid coins was found. Unfortunately no traces of early structures have been discovered at this site although there is a later mosque there. The earliest known structure on the island is the Kizimkazi Mosque which is dated by an inscription to 1107 CE and consists of a rectangular structure with three columns running down the centre to support the roof, which would have been flat. Although it was restored in the eighteenth century, excavations have shown that the basic form of the mosque dates back to the twelfth. South of the mosque are traces of domestic occupation and a stone tomb within an enclosure wall. Jongowe on Tumbatu island north-west of Zanzibar island contains one of the largest groups of remains on the island, covering an area of 25 hectares. The site has a long history with its own chronicle and was mentioned by Yakut. The present remains consist of a mosque and a group of houses dated to the twelfth and thirteenth centuries. The best-preserved building is the mosque which stands in an irregular enclosure next to the sea. It has a rectangular shape with a deep mihrab projecting from the north end and eight arched doorways, four on the west and four on east side. On the east side there is a side aisle next to the sea with its own mihrab. Both mihrabs are fairly plain structures built of cut reef coral. Also on Tumbatu island is the site of Gomani which has important examples of local tombs dated to 1400 CE. In the sixteenth century Zanzibar was occupied by the Portuguese who established farmsteads on the island and built a church in Zanzibar town which was later converted into an Omani fort. There are a few remains of Islamic buildings from the eighteenth century with the exception of some of the Kizimkazi ruins and the mosque and tombs of Shakani. From the beginning of the eighteenth century Portuguese power in the area declined in favour of the Omanis who took over many of the former Portuguese bases. By 1832 the Omani position in Zanzibar was so secure that Sultan Sayyid Sa‘id moved his capital from Muscat to Zanzibar. This move meant that a whole new series of buildings were erected to house the new sultans and their administration. One of the first Omani buildings in Zanzibar was the Mtoni Palace built for Sayyid Sa‘id in 1830 which is about 5 km north of Zanzibar town. Although the palace is much ruined, substantial remains are still standing including the harem, the domed bath block containing hot and cold water plunges and the sultan’s personal mosque on the beach. Nearby is the Marhubi Palace, built in 1880 by Sayyid Barghash and enclosed in over 50 hectares of gardens. Although the palace was burnt down in 1890 the bath complex still stands which includes domed baths, pavilions, water storage tanks and an aqueduct. Other buildings with bath complexes are the...
country houses of Kidichi and Kizimbi — the Kidichi baths have beautiful examples of Persian stucco work on the interior. Approximately 10 km north of Zanzibar town are the ruins of Chuini Palace also built by Sayyid Barghash. The building is several storeys high and consists of a central core containing rooms opening out to balconies on each side which are supported with massive cylindrical columns. Other Omani palaces on Zanzibar are Beit al-Ras and the Dunga Palace both built around 1850.

The town of Zanzibar is known as the ‘Stone Town’ to distinguish it from the newer suburbs. Most of the buildings in the old town date to the nineteenth century and are notable for their highly decorative wooden doorways. The centre of the town contains the various ministries of the sultanate built in the eighteenth and nineteenth centuries. These buildings have the same form of some of the palaces with a multi-storey central block surrounded on all sides by extensive verandas. One of the more recent palaces, the Beit al-Ajcib, is built in the same style but the verandas are supported with imported iron columns. The Portuguese church in the centre was converted into a fort with four towers by the Omanis in 1800. One of the more unusual buildings is the public baths (Haman) built out of brick and coral stone by Sayyid Barghash in 1880 which are the only known public baths of this type in East Africa. Another notable building in Zanzibar town is the National Museum completed in 1925 to the design of a British architect working in the Oriental style, which resembles the Hagia Sophia in Istanbul.

Pemba

Pemba has many more archaeological sites than Zanzibar and even today it is more populous than its neighbour. The earliest site so far discovered is at Mtambwe Mkuu dated to the eleventh century, although this has no early standing structures. Some of the earliest structures on the island are found at Ras Mkumbuu which is one of the largest sites on the East African coast. The remains date to the fourteenth century and consist of a mosque, a number of pillar tombs and many houses, of which four are still standing. The mosque is a large structure four aisles wide and five bays deep, supported on three rows of four rectangular piers. The mihrab is centrally placed and aligned with the central row of columns and there is a tower entered from a doorway to the east of the mihrab. This is one of the few pre-nineteenth-century examples of a minaret in East Africa, although it seems likely that the tower was not very tall. (Other fourteenth-century mosques on Pemba include Shamiyan, Mtangani, Mduni and Mkia wa Ngombe.) On the east coast of Pemba are the remains of Pujini which are famous as the only pre-Portuguese fortifications on the East African coast. The fortifications date to approximately 1400 CE and comprise a square area enclosed by walls and ramparts containing houses and a barrack block.

The capital, Chake, contains a nineteenth-century Swahili fort and the Bohra Mosque. The Bohra Mosque dates to the early twentieth century and was built by the Bohra Indians of Pemba. The mosque is a two-storey structure containing a prayer hall below and a Quran school above and is one of the few examples of Indian Muslim architecture in East Africa.

See also: coral, East Africa, Tanzania

Further Reading:

Zaragoza

City in north-west Spain which was Muslim from the eighth to the twelfth century and which continued as a centre of Mudéjar culture.

During the Islamic period the town was settled by Berbers from North Africa who in the eleventh century were ruled over by their own Dhu Nunid amirs. The city finally fell to Alfonso VI of León and Castile in 1085.

Few remains of the Islamic period survive with the exception of Parts of the city walls and parts of the Aljaferia palace. The Islamic parts of the city walls have been dated to the late ninth century whilst the most visible parts are Mudéjar work.

The most well-known part of Zaragoza is the fortified palace complex known as the Aljafería.
The outer walls of this structure have recently been restored and may be Islamic, the main gate is a round horseshoe arch between two semi-circular bastions. Remains of the mosque can be found incorporated into a later church. Inside, there is a square room covered by a dome and a mihrab with a horseshoe arch covered by a semi-dome as in the mosque at Córdoba.

Within the palace most of the building is Mudéjar and consists of a series of courtyards decorated with arches and pools leading to the royal hall. The arches are cusped and rest on pairs of columns with re-used Islamic capitals. Between the arches the building is decorated with ornate interlacing strapwork and vegetal motifs.

Many of the churches of the city also contain much Mudéjar work. The cathedral, known as La Seo, has an interesting mixture of Islamic-style blind niches and diaper-patterned brickwork with Gothic windows.

See also: Córdoba, Granada, Seville, Spain

Further reading:

The name is derived from an Arabic term meaning an addition or increase in size. The best surviving examples of ziyadas can be found in Samarra at the Great Mosque (847) and the Abu Dulaf Mosque (861) and also at the mosque of Ibn Tulun in Cairo. The earliest example is at the Great Mosque at Samarra where an outer enclosure surrounds the mosque on the east, north and west sides (i.e. not on the qibla side). This enclosure is surrounded by an even larger rectangle which encloses all four sides of the mosque although the south side is narrower than the other sides. The area covered by the mosque and its ziyadas amounts to 17 hectares. Likewise the mosque of Abu Dulaf which copies the Great Mosque in many ways also has two ziyadas or enclosures.

The mosque of Ibn Tulun provides the best-preserved example of a ziyada. Like the mosques at Samarra the ziyada encloses the mosque on the three sides away from the qibla. The enclosure wall resembles that of the mosque itself with its niches and crenellations. Each wall is pierced with several doorways which led from adjoining markets. Although no remains have been traced, four historical sources imply that latrines and places for ablution were located within the ziyada.

The origin of the ziyada is likely to have been the outer temenos of pre-Islamic shrines or sanctuaries where the temple was separated from the secular city by an outer enclosure. Ziyadas are not usually found on the qibla side of a mosque as this position was reserved for the Dar al-Imara.

Further reading:

Venerated shrine or mausoleum.

Arabic term for shaded area. Used to refer to sanctuary or covered part of mosque.