Well, what an experience. This was our inaugural Tau Anthropological Safaris tour, and what better destination in terms of the sheer volume of history, people, culture, wildlife and of course amazing food! Our focus was to explore the fascinating cultural aspects of this amazing part of the world and of course, some of the wild animals and birds which call India home.

25 October 2014
I arrived in India a day before the group to acclimatize myself and get over the journey. On arrival at the airport I met Ansar Khan, a resident of Rajasthan and an expert birder. He was to be our local guide for the tour, and he turned out to be an excellent guide, very personable and an absolute pleasure to travel with. He has authored a book called the ‘Birds of Rajasthan’ and was an excellent photographer too! The sky of New Delhi was very smokey, due to the unbelievable quantity of fire crackers used during this week’s festival of Diwali. Diwali or the "festival of lights" is a yearly celebration. It is an ancient Hindu festival celebrated in autumn every year. The festival spiritually signifies the victory of light over darkness, knowledge over ignorance, good over evil, and hope over despair. A positive effect of Diwali was that there was absolutely no traffic in Delhi...a very unusual thing indeed!

26 October 2014
Day 1
I was up early to head to the airport with Ansar, as this morning our group was scheduled to arrive from the UK and Canada. We waited patiently at Indira Ghandi Airport, after a slight delay with the plane coming in from Heathrow, and eventually David and Gordon popped
out of the automatic doors. David is a medical doctor and Gordy is an exploration geologist with a wicked sense of humour! Unfortunately they were coming to tell me there was an issue with the luggage...and our friends at British airways had lost every piece of baggage! Well it wasn’t just our flight! I heard from a friend who travelled to Italy on the same day that his had also disappeared! This was the start of a three day tracking session by myself and Ansar to relocate the luggage!

Eventually the whole group came through, and we headed off to our hotel and to enjoy our first Indian meal. Everyone was excited to get their first taste of the local cuisine, which seemed to go from strength to strength during our journey. After lunch we decided to bundle everyone into our tour bus and head into the city. Our first stop was at Qutb Minar. Roughly translated the word Minar means ‘a place taken from the Hindus’, and this is exactly what it was. In around 1192 AD the Moslem Moghul kings had taken the area from the Hindu leaders. This is the 2nd tallest minar (72.5 metres) in India after Fateh Burj which stands 100 meters tall. However, it is the tallest sandstone tower in the world! Qutb Minar is a UNESCO World Heritage Site. It is made of red sandstone and marble. The 379 stairs of the tower lead to the top at 72.5 metres (237.8 ft)! Construction began in 1192 by Qutb-ud-din Aibak and was carried on by his successor Iltutmish. In 1368, Firoz Shah Tughlaq constructed the fifth and the last storey. It is surrounded by several other ancient and medieval structures and ruins, collectively known as the Qutb complex. It may have been named after Qutbuddin Bhaktiyar Kaki, a famous Sufi saint who was living in Delhi contemporarily. The minar is itself built on the ruins of the Lal Kot, the Red Citadel in the city of Dhillika, the capital of the Tomars and the Chauhans, the last Hindu rulers of Delhi. Numerous inscriptions in Parso-Arabic and Nagari characters in different sections of the Qutb Minar reveal the history of its construction. According to the inscriptions on its surface it was repaired by Firoz Shah Tughlaq (AD 1351–89) and Sikandar Lodi (AD 1489–1517).

The Qubbat-ul-Islam Mosque, located at the northeast of Minar, was built by Qutb deen Aibak in AD 1198. It is the earliest mosque built by the Delhi Sultans. The minar has been damaged by earthquakes and lightning strikes on several occasions but has been repaired and renovated by various rulers. During the rule of Firoz Shah, the minar's two top floors were damaged due to lightning but were repaired by Firoz Shah. In 1505, an earthquake struck and it was repaired by Sikandar Lodi. Later in 1794, the minar suffered another earthquake and it was Major Smith, an English engineer, who repaired the affected parts of the minar. He replaced Firoz Shah’s pavilion at the top of the tower with his own pavilion. This pavilion was removed in 1848 by Lord Hardinge and now stands between the Dak Bungalow and the Minar in the garden.
The minar, Ralph in action, and Jacques and Ginnie enjoying some time to wander around

The intricately carved stones were full of symbols of the Hindu faith, which were still in place from the original structures used to build the Moslem structures, dating back to the time of Lal Kot, the Red City. Amazing carvings on Hindu style Pillars clashing with Moslem styles of building, effigies of Hindu Gods and lovely lotus flowers were complimented by the beautiful greens and pinks of the Alexandrine and Rose-ringged parakeets which flocked along the weathered walls of the Mosques. In town as we left we also saw a female Nilgai or Blue buck (India’s largest antelope), with a Indian house crow on her back. Just casually standing in a park in the inner city! Rhesus macaques are common in the city, and we saw several of these comical but aggressive monkeys, including a mating pair at a traffic light!

The detail on the walls at Qutb minar is amazing, a Nilgai in Delhi and a Rhesus macaque

We also intended to visit the India Gate, but we found a huge crowd, of probably more than 20 000 people there for an evening Diwali celebration, so we felt it best just to respectfully view the gate from a distance. The India Gate was originally called the All India War Memorial. It is a war memorial located astride the Rajpath, on the eastern edge of the ‘ceremonial axis’ of New Delhi, formerly called Kingsway. India gate is a memorial to 82,000 soldiers of the undivided Indian Army who died in the period 1914–21 in First World War
and the Third Anglo-Afghan War. 13,300 servicemen’s names, including some soldiers and officers from the UK, are inscribed on the gate. The India Gate, even though a war memorial, evokes the architectural style of the triumphal arch like the Arch of Constantine, outside the Colosseum in Rome, and is often compared to the Arc de Triomphe in Paris, and the Gateway of India in Bombay. It was designed by Sir Edwin Lutyens. In 1971, following the Bangladesh Liberation war, a small simple structure, consisting of a black marble plinth, with reversed rifle, capped by war helmet, bounded by four eternal flames, was built beneath the soaring Memorial Archway. This structure, called Amar Jawan Jyoti, or the Flame of the Immortal Soldier, since 1971 has served as India’s Tomb of the Unknown Soldier.

We figured a last stop for a bit of retail therapy might work for the group, especially Ginny and Gilda, so we went past a local shop which sold beautiful cloth, shirts, ornaments and other trinkets and goods. We were served some cold drinks, and shown around the multi-story shop, until our purchases had been done and then it was time to head off for a well-earned break! After our drive around Delhi we headed back toward the hotel, to meet Maggie, the last of our arrivals. She had just come in from the USA, via Dubai, and was also, like us, ready for a good rest!

27 October 2014
Day 2
Today we journeyed out of New Delhi, heading down the newly completed highway to Agra, the home of the Taj Mahal. We were on the road by half past six, and in our bus, negotiating the traffic of a Delhi morning. Motorcycles (often with three or four passengers), tuk tuk’s, trucks, cars, busses, bicycles, push carts, ox carts and pedestrians streamed along the roads, generally obeying the rule that the bigger the vehicle the more rights they have. Of course the cows standing in the middle of the bustling roadways as if they own the place did nothing to speed up the flow of the endless stream of mobile humanity. The new road to Agra is a toll road, which immediately reduced the traffic by 80 percent! The highway by-passes the formula 1 race track and several other huge housing developments in this rapidly changing part of India. Billions of dollars of investment are being pumped into these new ‘cities’ along the highway, a place for the new rising middle class and wealthy of India to settle, beyond the congestion and squalor of the streets of Delhi. The new highway has a gently bouncing, up and down motion, which softly rocked our bus for three hours. At least one case of seasickness was reported! We stopped for a good coffee on the way, and then headed out to finish our final run to the historic city. Entering Agra was an amazing experience. Huge fleets of washer men, cleaning sheets and clothes in the Yamuna River, brightly painted oxen, pulling their masters carts. Huge oxen, with horns of yellow, blue and green...spots of decorations all over their fur, with writing and patterns. Amazing food carts covered in more shiny ‘bling’ than any American rapper could dream of carrying, chapattis, dishes of curries in leaf bowls, kebab like meals and vegetables, all sold hot and fresh on the side of the road. (Unfortunately I had to advise our group against eating any of these dishes due to the ever present risk of getting ill, due to the inability of our bodies to fight some of the germs that may be carried in the water used in cooking).

Tuk tuk’s were everywhere, monuments and statues towered alongside the roads. An interesting experience indeed, just to see the people! We checked in at Clarks Shiraz, our hotel in Agra...and wow. We were met by Sikh guards, with large moustaches, twisted
upwards at the corners of their mouth, dressed in military-like uniforms with broad colourful sashes and bright turbans. The beautiful gardens also were very attractive, with the large pool and the wonderful palm trees, full of Three-striped palm squirrels. We were fortunate enough to have a view of the Taj Mahal from all of our rooms. We headed downstairs for a delicious buffet style lunch before we headed out for our first visit to the Taj Mahal. We had planned an afternoon and a morning visit, and it was a good thing that we did. We arrived to tens of thousands of visitors from all over India, who had, as part of their Diwali festival plans, made a trip to the Taj. We spent our afternoon out in the gardens, listening to our local expert, Limon, who told us all of the relevant history of the Taj Mahal, and the story of Mumtaz Jahan, the mother of fourteen for whom it was built. We learned of the three burial sites she had been interred in after her death, of course culminating in the amazing monument to the Shah’s love to her, the Taj Mahal itself. He also explained much about the building methods employed to complete this incredible structure. The following pages are a description summarised from various web sites, of some of the more interesting aspects pertaining to this, which in my opinion, is the most amazing building on Earth!

The name ‘Taj Mahal’ is originally taken from Persian and Arabic, meaning the "crown of palaces". It is a white marble mausoleum located in Agra, Uttar Pradesh, India. It was built by the Mughal emperor Shah Jahan in memory of his third wife, Mumtaz Mahal.

The Taj Mahal is regarded by many as the finest example of Mughal architecture, a style that combines elements from Islamic, Persian, Ottoman Turkish and Indian architectural styles. In 1983, the Taj Mahal became recognised as a UNESCO World Heritage Site. While the white domed marble mausoleum is the most familiar component of the Taj Mahal, it is actually an integrated complex of structures. The construction began around 1632 and was completed around 1653, employing thousands (said by some to be more than twenty thousand) of artisans and craftsmen.

In 1631, Shah Jahan, emperor during the Mughal empire's period of greatest prosperity, was grief-stricken when his third wife, Mumtaz Mahal, a Persian princess, died during the birth of their 14th child, Gauhara Begum. Construction of the Taj Mahal began in 1632. The court chronicles of Shah Jahan's grief illustrate the love story traditionally held as an inspiration for Taj Mahal. The principal mausoleum was completed in 1648 and the surrounding buildings and garden were finished five years later.
Emperor Shah Jahan himself described the Taj in these words:

Should guilty seek asylum here,
Like one pardoned, he becomes free from sin.
Should a sinner make his way to this mansion,
all his past sins are to be washed away.
The sight of this mansion creates sorrowing sighs;
and the sun and the moon shed tears from their eyes.
In this world this edifice has been made;
To display thereby the creator's glory.

The Taj Mahal incorporates and expands on design traditions of Persian architecture and earlier Mughal architecture. Specific inspiration came from successful Timurid and Mughal buildings including; the Gur-e Amir (the tomb of Timur, progenitor of the Mughal dynasty, in Samarkand), Humayun's Tomb, Itmad-Ud-Daulah's Tomb (sometimes called the Baby Taj), and Shah Jahan's own Jama Masjid in Delhi. While earlier Mughal buildings were primarily constructed of red sandstone, Shah Jahan promoted the use of white marble inlaid with semi-precious stones, and buildings under his patronage reached new levels of refinement.

The tomb is the central focus of the entire complex of the Taj Mahal. This large, white marble structure stands on a square plinth and consists of a symmetrical building with an iwan (an arch-shaped doorway) topped by a large dome and finial. Like most Mughal tombs, the basic elements are Persian in origin.

The base structure is essentially a large, multi-chambered cube with chamfered corners, forming an unequal octagon that is approximately 55 metres (180 ft) on each of the four long sides. On each of these sides, a huge pishtaq, or vaulted archway, frames the iwan with two similarly shaped, arched balconies stacked on either side. This motif of stacked pishtaqs is replicated on the chamfered corner areas, making the design completely symmetrical on all sides of the building. Four minarets frame the tomb, one at each corner of the plinth facing the chamfered corners. The main chamber houses the false sarcophagi of Mumtaz Mahal and Shah Jahan; the actual graves are at a lower level.

The marble dome that surmounts the tomb is the most spectacular feature. Its height of around 35 metres (115 ft) is about the same as the length of the base, and is accentuated as it sits on a cylindrical "drum" which is roughly 7 metres (23 ft) high. Because of its shape, the dome is often called an onion dome. The top is decorated with a lotus design, which also serves to accentuate its height. The shape of the dome is emphasised by four smaller domed chattris (kiosks) placed at its corners, which replicate the onion shape of the main
dome. Their columned bases open through the roof of the tomb and provide light to the interior. Tall decorative spires (guldastas) extend from edges of base walls, and provide visual emphasis to the height of the dome. The lotus motif is repeated on both the chattris and guldastas. The dome and chattris are topped by a gilded finial, which mixes traditional Persian and Hindustani decorative elements.

Reflection of the Taj mahal in the pools, and some detail in cornelian and agate

The main finial (the metal adornment on the top of the dome) was originally made of gold but was replaced by a copy made of gilded bronze in the early 19th century. This feature provides a clear example of integration of traditional Persian and Hindu decorative elements. The finial is topped by a moon, a typical Islamic motif whose horns point heavenward. Because of its placement on the main spire, the horns of the moon and the finial point combine to create a trident shape, reminiscent of traditional Hindu symbols of Shiva. The minarets, which are each more than 40 metres (130 ft) tall, display the designer’s penchant for symmetry. They were designed as working minarets—a traditional element of mosques, used by the muezzin to call the Islamic faithful to prayer. Each minaret is effectively divided into three equal parts by two working balconies that ring the tower. At the top of the tower is a final balcony surmounted by a chattri that mirrors the design of those on the tomb. The chattris all share the same decorative elements of a lotus design topped by a gilded finial. The minarets were constructed slightly outside of the plinth so that, in the event of collapse, (a typical occurrence with many tall constructions of the period) the material from the towers would tend to fall away from the tomb.

Jacques, Jonathan, Ralph and Ginnie pose for a picture, as do Maggie and Gordon
The exterior decorations of the Taj Mahal are among the finest in Mughal architecture. As the surface area changes the decorations are refined proportionally. The decorative elements were created by applying paint, stucco, stone inlays, or carvings. In line with the Islamic prohibition against the use of anthropomorphic forms, the decorative elements can be grouped into either calligraphy, abstract forms or vegetative motifs.

The calligraphy on the Great Gate reads- “O Soul, thou art at rest. Return to the Lord at peace with Him, and He at peace with you.”

The calligraphy was created by a calligrapher named Abd ul-Haq, in 1609. Shah Jahan conferred the title of "Amanat Khan" upon him as a reward for his "dazzling virtuosity". Near the lines from the Qur'an at the base of the interior dome is the inscription, "Written by the insignificant being, Amanat Khan Shirazi." Much of the calligraphy is composed of florid thuluth script, made of jasper or black marble, inlaid in white marble panels. Higher panels are written in slightly larger script to reduce the skewing effect when viewed from below. The calligraphy found on the marble cenotaphs in the tomb is particularly detailed and delicate.

Some fun with cameras and a beautiful sunset

Abstract forms are used throughout, especially in the plinth, minarets, gateway, mosque, jawab and, to a lesser extent, on the surfaces of the tomb. The domes and vaults of the sandstone buildings are worked with tracery of incised painting to create elaborate geometric forms. Herringbone inlays define the space between many of the adjoining elements. White inlays are used in sandstone buildings, and dark or black inlays on the white marbles. Mortared areas of the marble buildings have been stained or painted in a contrasting colour, creating geometric patterns of considerable complexity. Floors and walkways use contrasting tiles or blocks in tessellation (the tiling of a plane using one or more geometric shapes) patterns.

Mosque and a carved flower in marble
On the lower walls of the tomb there are white marble dados that have been sculpted with realistic bas relief depictions of flowers and vines. The marble has been polished to emphasise the exquisite detailing of the carvings and the dado frames and archway spandrels have been decorated with inlays of highly stylised, almost geometric vines, flowers and fruits. The inlay stones are of cornelian, agate, lapis lazuli, jasper and malachite, polished and levelled to the surface of the walls. Some of these stones are brought from far away in Africa. A type of glue (known only to five artisans at the time of writing) is used in the seating of the stones. This glue can only be melted once, and was invented around the time of the construction of the Taj, according to the local legends.

The interior chamber of the Taj Mahal steps far beyond traditional decorative elements. Here, the inlay work is a lapidary of precious and semiprecious gemstones. The inner chamber is an octagon with the design allowing for entry from each face, although only the door facing the garden to the south is used. The interior walls are about 25 metres (82 ft) high and are topped by a "false" interior dome decorated with a sun motif. Eight pishtaq arches define the space at ground level and, as with the exterior, each lower pishtaq is crowned by a second pishtaq about midway up the wall. The four central upper arches form balconies or viewing areas, and each balcony's exterior window has an intricate screen or jali cut from marble. In addition to the light from the balcony screens, light enters through roof openings covered by chhatris (elevated, dome-shaped pavilions used as an element in Indian architecture which are commonly used to depict the elements of pride and honour) at the corners. Each chamber wall has been highly decorated with dado bas-relief, intricate lapidary inlay and refined calligraphy panels, reflecting in miniature detail the design elements seen throughout the exterior of the complex. The octagonal marble screen or jali which borders the cenotaphs is made from eight marble panels which have been carved through with intricate pierce work. The remaining surfaces have been inlaid in extremely delicate detail with semi-precious stones forming twining vines, fruits and flowers.

Muslim tradition forbids elaborate decoration of graves. Hence, the bodies of Mumtaz and Shah Jahan were put in a relatively plain crypt beneath the inner chamber with their faces turned right and towards Mecca. Mumtaz Mahal's cenotaph is placed at the precise centre of the inner chamber on a rectangular marble base of 1.5 by 2.5 metres (4 ft 11 in by 8 ft 2 in).

Both the base and casket are elaborately inlaid with precious and semiprecious gems. Calligraphic inscriptions on the casket identify and praise Mumtaz. On the lid of the casket is a raised rectangular lozenge meant to suggest a writing tablet. Shah Jahan's cenotaph is beside Mumtaz's to the western side, and is the only visible asymmetric element in the entire complex. His cenotaph is bigger than his wife's, but reflects the same elements: a larger casket on a slightly taller base, again decorated with astonishing precision with lapidary and calligraphy that identifies him. On the lid of this casket is a traditional sculpture of a small pen box.

The pen box and writing tablet were traditional Mughal funerary icons decorating the caskets of men and women respectively. The Ninety Nine Names of God are found as calligraphic inscriptions on the sides of the actual tomb of Mumtaz Mahal, in the crypt.
including "O Noble, O Magnificent, O Majestic, O Unique, O Eternal, O Glorious... ". The tomb of Shah Jahan bears a calligraphic inscription that reads; "He travelled from this world to the banquet-hall of Eternity on the night of the twenty-sixth of the month of Rajab, in the year 1076 Hijri. The complex is set around a large 300-metre (980 ft) square charbagh or Mughal garden. The garden uses raised pathways that divide each of the four quarters of the garden into 16 sunken parterres or flowerbeds. A raised marble water tank at the center of the garden, halfway between the tomb and gateway with a reflecting pool on a north-south axis, reflects the image of the mausoleum. The raised marble water tank is called al Hawd al-Kawthar, in reference to the "Tank of Abundance" promised to Muhammad. Elsewhere, the garden is laid out with avenues of trees and fountains. The charbagh garden, a design inspired by Persian gardens, was introduced to India by the first Mughal emperor, Babur. It symbolises the four flowing rivers of Jannah (Paradise) and reflects the Paradise garden derived from the Persian paridaeza, meaning 'walled garden'. In mystic Islamic texts of Mughal period, Paradise is described as an ideal garden of abundance with four rivers flowing from a central spring or mountain, separating the garden into north, west, south and east.

28 October 2014
DAY 3

This morning we awoke really early in order to get to the Taj before there were any other visitors...or at least a lot less. We were very successful in this, and there were only a few people in the queue before us, so when we actually entered the grounds we had a view of the Taj Mahal with virtually no people around. Moving around within the tomb was comfortable and spacious, and we could spend lots of time at the monument. But here I will continue with more of the history and architecture of the Taj... Most Mughal charbaghs are rectangular with a tomb or pavilion in the centre. The Taj Mahal garden is unusual in that the main element, the tomb, is located at the end of the garden. With the discovery of Mahtab Bagh or "Moonlight Garden" on the other side of the Yamuna, the interpretation of the Archaeological Survey of India is that the Yamuna river itself was incorporated into the garden's design and was meant to be seen as one of the rivers of Paradise. The similarity in layout of the garden and its architectural features with the Shalimar Gardens suggest that they may have been designed by the same architect, Ali Mardan. Early accounts of the garden describe its profusion of vegetation, including abundant roses, daffodils, and fruit trees. As the Mughal Empire declined, the tending of the garden also declined, and when the British took over the management of Taj Mahal during the time of the British Empire, they changed the landscaping to resemble that of lawns of London.

A camel and an Indian palm squirrel
The Taj Mahal complex is bounded on three sides by crenellated red sandstone walls, with the river-facing side left open. Outside the walls are several additional mausoleums, including those of Shah Jahan's other wives, and a larger tomb for Mumtaz's favourite servant. These structures, composed primarily of red sandstone, are typical of the smaller Mughal tombs of the era. The garden-facing inner sides of the wall are fronted by columned arcades, a feature typical of Hindu temples which was later incorporated into Mughal mosques. The wall is interspersed with domed chattris, and small buildings that may have been viewing areas or watch towers like the Music House, which is now used as a museum.

The main gateway (darwaza) is a monumental structure built primarily of marble which is reminiscent of Mughal architecture of earlier emperors. Its archways mirror the shape of tomb's archways, and its pishtaq (An iwan is a rectangular hall or space, usually vaulted, walled on three sides, with one end entirely open. The formal gateway to the iwan is called pishtaq, a Persian term for a portal projecting from the facade of a building, usually decorated with calligraphy bands, glazed tile work, and geometric designs. Since the definition allows for some interpretation, the overall forms and characteristics can vary greatly in terms of scale, material, or decoration. Iwans are most commonly associated with Islamic architecture; however, the form was invented much earlier and fully developed in Mesopotamia, around the third century CE during the Parthian period) arches incorporate the calligraphy that decorates the tomb. It utilises bas-relief and pietra dura (called parchin kari in South Asia, is a term for the inlay technique of using cut and fitted, highly polished coloured stones) inlaid decorations with floral motifs. The vaulted ceilings and walls have elaborate geometric designs, like those found in the other sandstone buildings of the complex.

![The Taj in the early morning](image)

At the far end of the complex, there are two grand red sandstone buildings that face the sides of the tomb. Their backs parallel the western and eastern walls, and the two buildings are precise mirror images of each other. The western building is a mosque and the other is
the jawab (answer), whose primary purpose was architectural balance, although it may have been used as a guesthouse. The distinctions between these two buildings include the lack of mihrab (a niche in a mosque's wall facing Mecca) in the jawab and that the floors of jawab have a geometric design, while the mosque floor was laid with outlines of 569 prayer rugs in black marble. The mosque's basic design of a long hall surmounted by three domes is similar to others built by Shah Jahan, particularly to his Masjid-Jahan Numa, or Jama Masjid, Delhi. The Mughal mosques of this period divide the sanctuary hall into three areas, with a main sanctuary and slightly smaller sanctuaries on either side. At the Taj Mahal, each sanctuary opens onto an enormous vaulting dome. These outlying buildings were completed in 1643.

The Taj Mahal was built on a parcel of land to the south of the walled city of Agra. Shah Jahan presented Maharajah Jai Singh with a large palace in the centre of Agra in exchange for the land. An area of roughly three acres was excavated, filled with dirt to reduce seepage, and levelled at 50 metres (160 ft) above riverbank. In the tomb area, wells were dug and filled with stone and rubble to form the footings of the tomb. Instead of lashed bamboo, workmen constructed a colossal brick scaffold that mirrored the tomb. The scaffold was so enormous that foremen estimated it would take years to dismantle.

According to the legend, Shah Jahan decreed that anyone could keep the bricks taken from the scaffold, and thus it was dismantled by peasants overnight. A fifteen kilometre (9.3 mi) tamped-earth ramp was built to transport marble and materials to the construction site and teams of twenty or thirty oxen pulled the blocks on specially constructed wagons. An elaborate post-and-beam pulley system was used to raise the blocks into desired position. Water was drawn from the river by a series of purs, an animal-powered rope and bucket mechanism, into a large storage tank and raised to a large distribution tank. It was passed into three subsidiary tanks, from which it was piped to the complex.

Details of a flower and the reflected Taj in Ralph's glasses

The plinth and tomb took roughly 12 years to complete. The remaining parts of the complex took an additional 10 years and were completed in order of minarets, mosque and jawab, and gateway. Since the complex was built in stages, discrepancies exist in completion dates due to differing opinions on "completion". For example, the mausoleum itself was essentially complete by 1643, but work continued on the rest of the complex. Estimates of the cost of construction vary due to difficulties in estimating costs across time. The total cost has been estimated to be about 32 million Rupees at that time.
The Taj Mahal was constructed using materials from all over India and Asia and over 1,000 elephants were used to transport building materials. The translucent white marble was brought from Makrana, Rajasthan, the jasper from Punjab, jade and crystal from China. The turquoise was from Tibet and the Lapis lazuli from Afghanistan, while the sapphire came from Sri Lanka and the cornelian from Arabia (although some accounts cite Africa as the origin of the cornelian). In all, twenty eight types of precious and semi-precious stones were inlaid into the white marble.

The construction of the Taj Mahal was entrusted to a board of architects under imperial supervision, including Abd ul-Karim Ma'mur Khan, Makramat Khan, and Ustad Ahmad Lahauri. Lahauri is generally considered to be the principal designer.

A labour force of twenty thousand workers was recruited across northern India. Sculptors from Bukhara, calligraphers from Syria and Persia, inlayers from southern India, stonecutters from Baluchistan, a specialist in building turrets, another who carved only marble flowers were part of the thirty-seven men who formed the creative unit.

Soon after the Taj Mahal's completion, Shah Jahan was deposed by his son Aurangzeb and put under house arrest at nearby Agra Fort. Upon Shah Jahan's death, Aurangzeb buried him in the mausoleum next to his wife.

By the late 19th century, parts of the buildings had fallen badly into disrepair. During the time of the Indian rebellion of 1857, the Taj Mahal was defaced by British soldiers and government officials, who chiselled out precious stones and lapis lazuli from its walls. At the end of the 19th century, British viceroy Lord Curzon ordered a sweeping restoration project, which was completed in 1908. He also commissioned the large lamp in the interior chamber, modelled after one in a Cairo mosque. During this time the garden was remodelled with British-style lawns that are still in place today.

In 1942, the government erected a scaffolding in anticipation of an air attack by Japanese Air Force. During the India-Pakistan wars of 1965 and 1971, scaffoldings were once again erected to mislead bomber pilots.

More recent threats have come from environmental pollution on the banks of Yamuna River including acid rain due to the Mathura Oil Refinery. The pollution has been turning the Taj Mahal yellow. To help control the pollution, the Indian government has set up the Taj Trapezium Zone (TTZ), a 10,400-square-kilometre (4,000 sq mi) area around the monument where strict emissions standards are in place.

Concerns for the tomb’s structural integrity have recently been raised because of a decline in the groundwater level in the Yamuna river basin which is falling at a rate of around 5 feet a year. In 2010, cracks appeared in parts of the tomb, and the minarets which surround the monument were showing signs of tilting, as the wooden foundation of the tomb may be rotting due to lack of water. In 2011 it was reported that some predictions indicated that the tomb could collapse within 5 years.
This is a pretty comprehensive summary of the history and details of the Taj, a true wonder of the world, which it was a real privilege to see, touch and absorb.

We returned to our hotel for some lunch at midday, also taking advantage of the swimming pool and the other amazing facilities. After lunch we checked out and we headed off on our next excursion to the Fort at Agra where Shah Jahan, of Taj Mahal fame, actually lived.

The Agra Fort is also a UNESCO World Heritage site located in Agra, about 2.5 km northwest of its more famous sister monument, the Taj Mahal. The fort can be more accurately described as a walled city. The present-day structure was built by the Mughals, though a fort had stood there since at least the 11th century. Agra Fort was originally a brick fort, held by the Hindu Sikarwar Rajputs. It was mentioned for the first time in 1080 AD when a Ghaznavide force captured it. Sikandar Lodi (1488–1517) was the first Sultan of Delhi who shifted to Agra and lived in the fort. He governed the country from here and Agra assumed the importance of the second capital. He died in the fort at 1517 and his son, Ibrahim Lodi, held it for nine years until he was defeated and killed at Panipat in 1526. Several palaces, wells and a mosque were built by him in the fort during his period. After the First Battle of Panipat in 1526, Mughals captured the fort and seized a vast treasure, including the diamond later known as the Koh-i-Noor.

It has been said that whoever owned the Koh-i-Noor ruled the world, a suitable statement for this, the most famous of all diamonds and a veritable household name in many parts of the world. Legend has suggested that the stone may date from before the time of Christ; theory indicates the possibility of its appearance in the early years of the 1300s; history proves its existence for the past two and a half centuries. The first writer has stated:

"Regarding its traditional history, which extends 5000 years further back, nothing need be said here; though it has afforded sundry imaginative writers with a subject for highly characteristic paragraphs we have no record of its having been at any time a cut stone."

The earliest authentic reference to a diamond which may have been the Koh-i-Noor is found in the Baburnama, the memoirs of Babur, the first Mogul ruler of India. Born in 1483, Babur was descended in the fifth generation from Tamerlane on the male side and in the fifteenth degree from Genghis Khan on the female side. With the blood in his veins of two of the greatest conquerors Asia has ever seen, it is not all that surprising that Babur himself should have become a great conqueror in his own right.

At the time of Babur, northern India was divided among largely independent chiefs who were in no mood to resist a determined invader. After several probing raids into India, Babur was eventually invited by Daulat Khan, the ruler of Punjab, to help him with his fight against his nephew Ibrahim Lodi, Sultan of Delhi, who was proving to be a despotic ruler. In 1526 Babur defeated and killed Ibrahim Lodi, at the battle of Panipat; another who was slain was Vikramaditya, the former Rajah of Gwailor, who had fought on the side of Ibrahim Lodi.
Before going into battle, Vikramaditya had sent all his jewels to the fort of Agra of which he was the Qilidar. Among these jewels was a notable diamond. It has been considered possible -- though, in view of his disposition, unlikely -- that originally Ala-ed-Din may have rewarded Vikramaditya's ancestors, two faithful brothers, not only with Gwailor but also with the diamond. Babur came to Agra on May 4th, 1526, and the great diamond was most likely given to him there the next day. There is no reference to it recorded in the Baburnama which reads:

"When Humayun [Babur's son] arrived, Vikramaditya's people attempted to escape, but were taken by the parties which Humayun had placed upon the watch, and put in custody. Humayun did not permit them to be plundered. Of their own free will they presented to Humayun a peshkash, consisting of a quantity of jewels and precious stones. Among them was the famous diamond which had been acquired by Sultan Alaeddin [Ala-ed-Din]. It is so valuable that a judge of diamonds valued it at half the daily expense of the whole world. It is about eight misquals. On my arrival, Humayun presented it to me as a peshkash, and I gave it back to him as a present." The victorious Babur stayed in the fort in the palace of Ibrahim and built a baoli (step well) in it. The emperor Humayun was crowned here in 1530. Humayun was defeated at Bilgram in 1540 by Sher Shah. The fort remained with Suris till 1555, when Humanyun recaptured it. The Hindu king Hem Chandra Vikramaditya, also called 'Hemu', defeated Humanyun's army, led by Iskandar Khan Uzbek, and won Agra. Hemu got a huge booty from this fort and went on to capture Delhi from the Mughals. The Mughals under Akbar defeated King Hemu finally at the Second Battle of Panipat in 1556. Realizing the importance of its central situation, Akbar made it his capital and arrived in Agra in 1558. His historian, Abdul Fazal, recorded that this was a brick fort known as 'Badalgarh'. It was in a ruined condition and Akbar had it rebuilt with red sandstone from Barauli area in Rajasthan. Architects laid the foundation and it was built with bricks in the inner core with sandstone on external surfaces. Some 4,000 builders worked on it daily for eight years, completing it in 1573. It was only during the reign of Akbar's grandson, Shah Jahan that the site took on its current state. Unlike his grandfather, Shah Jahan tended to have buildings made from white marble, often inlaid with gold or semi-precious gems. He destroyed some of the earlier buildings inside the fort to make his own. At the end of his life, Shah Jahan was deposed and restrained by his son, Aurangzeb, in the fort. It is rumoured that Shah Jahan died in Muasamman Burj, a tower with a marble balcony with a view of the Taj Mahal. The view he would have had from within his beautiful prison can be seen here.

The prison chamber of Shah Jahan, showing his foot bath and its view of the famous memorial to his wife that he had in his final days

The fort was invaded by the Maratha Empire during the mid-18th century. Thereafter, it changed hands between the Marathas and their foes many times. After their catastrophic
defeat at the Third Battle of Panipat by Ahmad Shah Abdali in 1761, the Marathas remained out of the region for the next decade. Finally Mahadji Shinde took the fort in 1785 and it was lost by the Marathas to the British during the Second Anglo-Maratha War, in 1803.

The fort was the site of a battle during the Indian rebellion of 1857, which caused the end of the British East India Company's rule in India, and led to a century of direct rule of India by Britain.

The 94-acre (380,000 m²) fort has a semi-circular plan, its chord lies parallel to the river and its walls are seventy feet high. Double ramparts have massive circular bastions at intervals, with battlements, embrasures, machicolations and string courses. Four gates were provided on its four sides, one Khizri gate opening on to the river.

Two of the fort's gates are notable: the "Delhi Gate" and the "Lahore Gate." The Lahore Gate is also popularly also known as the "Amar Singh Gate," for Amar Singh Rathore.

The monumental Delhi Gate, which faces the city on the western side of the fort, is considered the grandest of the four gates and a masterpiece of Akbar's time. It was built circa 1568 both to enhance security and as the king's formal gate, and includes features related to both. It is embellished with inlay work in white marble. A wooden drawbridge was used to cross the moat and reach the gate from the mainland; inside, an inner gateway called Hathi Pol ("Elephant Gate") – guarded by two life-sized stone elephants with their riders – added another layer of security. The drawbridge, slight ascent, and 90-degree turn between the outer and inner gates make the entrance impregnable. During a siege, attackers would employ elephants to crush a fort's gates. Without a level, straight run-up to gather speed, however, something prevented by this layout, elephants are ineffective.

One of the seating areas of the queen, at the Agra Fort and the view over the walls and moat toward the Taj Mahal and Jacques posing for a picture
Squeezed into a Tuk Tuk, and maggie with the Taj

Because the Indian military (the Parachute Brigade in particular) is still using the northern portion of the Agra Fort, the Delhi Gate cannot be used by the public. Tourists enter via the Amar Singh Gate.

The site is very important in terms of architectural history. Abul Fazal recorded that five hundred buildings in the beautiful designs of Bengal and Gujarat were built in the fort. Some of them were demolished by Shah Jahan to make way for his white marble palaces. Most of the others were destroyed by the British between 1803 and 1862 for raising barracks. Hardly thirty Mughal buildings have survived on the south-eastern side, facing the river. Of these, the Delhi Gate and Akbar Gate and one palace – "Bengali Mahal" – are representative Akbari buildings. Akbar Darwazza (Akbar Gate) was renamed Amar Singh Gate by the British. An interesting mix of Hindu and Islamic architecture is found here. In fact, some of the Islamic decorations feature haraam (sinful) images of living creatures – dragons, elephants and birds, instead of the usual patterns and calligraphy seen in Islamic surface decoration. The traditional dress of the people in the fort was dazzling, with wonderful sari’s and dresses to be seen around every corner.

Once we had done with this aspect of our visit we took an exciting ride in local Tuk Tuk’s, or three wheeled taxi cabs, through the bustling city! It was exhilaratingly exciting, and our lives flashed before our eyes as we drove helter-skelter between the oncoming traffic in true Indian style! The relief on the faces of all when we finally got off the tuk tuk’s was evident in the laughter and the body language (and the weak knees)! Our final destination was to link up with our final piece of baggage, which British Airways had sent to New Delhi (hundreds of kilometres away). But, ever resourceful, we had managed to find a taxi driver willing to transport it the seven hours to us in Agra! A joyful reunion with the baggage resulted in a jig danced by Ginnie in the streets of Agra, much to the amazement and amusement of some of the locals.

We had another visit in store for our guests today, to a small family owned manufacturing plant for marble artefacts. The small items are hand crafted by the descendants of the original craftsmen who built the Taj Mahal itself. The small pieces of cornelian, agate, jasper and lapis lazuli are hand crafted on small sanding wheels, driven by the hand of the craftsman by means of a bow and string system, much like a bow drill. They are cut to tiny sizes, and seated into the marble base. These bases can be carved in the shape of an elephant, be a flat circular table top or be a perfect sphere. Ornaments of every shape and description could be found, each with beautiful inlays of semi-precious stone, just like
miniature works from the Taj Mahal! It was wonderful to see, and most of us left with some type of memorabilia from their small store. Later, we headed for a sumptuous supper, at a local restaurant and then proceeded to the train station for our overnight journey to Katni. We had secured first class carriages, and were very excited to get a nights rest in the swaying carriages.

Sheer relief at surviving the Tuk Tuk ride, and a beautiful little girl we met at the Agra Fort

29 October 2014

DAY 4

The next morning we arrived at the station in the town of Katni. From here it would be a three hour drive to Bandhavgarh and the small town of Tala where we would stay. The drive was exhilarating, the roads were terrible, cattle and people were in plentiful supply...a true Indian journey! The final part of the road to Tala was brand new, and a single lane, elevated half a metre above the verge. This proved to be interesting when there was an oncoming vehicle, resulting in up to half a kilometre of reversing to find a sloped section to dismount the single lane. It was all very exciting, especially as this type of road is comparatively rare in Canada, where there seems to be some sense of safety in terms of design for road users! The National Park is officially closed on Wednesday’s, so we took the opportunity to do some activities in and around the lodge and the town of Tala. A cooking demonstration was planned by the chefs who would be catering for us over the next six days, and this turned out to be a most filling lesson indeed! Wonderful dishes were made and mixed, spices were introduced and bottles of water were consumed to control the flames!

Chefs doing a cooking display, Gordon in a fine mood and a small shop in Tala
The walk into town was simply a chance to absorb a little local culture and to see some of the homes of the simple folk who live this far out into the countryside. The market place had many fruits and vegetables on display, including coconut, brinjal (eggplant), carrots, chilli and bananas. David, ever the adventurer, made his way to a local school and ended up on a tour with the headmaster, meeting the children and getting a detailed understanding of how the school operated.

Coconuts and eggplant at the market

30 October 2014
DAY 5
We awoke at 5AM to be ready to travel to the gates of the park. Coffee, tea or chai was served in our rooms, along with biscuits and fruit. Then we met to depart by 5:30 and climbed into the little Maruti Gypsies to drive the 1km to the park. These little vehicles take four of us, a park guide and a driver, so a maximum of six seats! We meet at the gates to await the opening of the park at 6:15, and join the row of vehicles waiting to enter. The park has a route system designed to prevent congestion, and involves a random allocation of either routes A, B, C or D within Tala, EFGH in Maghdi and so forth.
We entered the park at Tala gate for our first trip, and began immediately to encounter the more common species. The densities of wildlife are amazing, with deer and monkeys around every corner. Sambar, Cheetal, Muntjak and Hanuman langur were amongst the most commonly seen species.

Sambar and Cheetal
The Sambar is a large dark brown deer, which is a preferred prey item of the tiger. It has a deep growling bark which indicates the presence of these beautiful predators. The Cheetal, or spotted deer are found throughout the park, and are extremely beautiful. The stags develop beautiful velvet covered antlers at this time of year. They are mixed feeders, eating both grass and leaf material, but usually depend upon the Hanuman langurs, which kindly drop huge bunches of fresh leaves for them to eat. This is a relationship calculated to assist the monkeys with an early warning of the tiger's approach, by having a whole herd of Cheetal below to indicate the arrival of this predator. The Cheetal has a loud whooping alarm call. The diminutive Indian muntjac, or barking deer, is reddish brown. The male has tiny inward curving antlers. These creatures are typically shy and retiring, but we saw reasonably good numbers of them on our journeys.

Birdlife in India is also wonderful, with interesting species such as red junglefowl (ancestor of the domestic chicken) and the beautiful Indian peacock being seen commonly in the forests. The array of birds is astounding, from tiny secretive birds such as the greenish warbler to the loud and highly visible Malabar pied hornbill.

As usual we looked into the tracking aspects of the forests too, with footprints and signs of tiger being commonly found as well as many other interesting aspects of track and sign evidence left behind by the inhabitants of these ancient woods. Here the track and foot scrapes of a tiger can be seen, evidence which we found often on our journeys, but sadly we never actually saw the animal itself! In spite of this we still saw an amazing array of game, including bears, Gaur and leopards...
31 October 2014
DAY 6
Up nice and early, with our tea and coffee delivered to our rooms, just in time to meet up for safari. Birds and animals galore, as well as wonderful scenery in the forests were the order of the day.

Amazing animals were also in evidence, as we followed the hilly trails up and down in search of our quarry. Each day we took two drives, visiting interesting caves, which were hand hewn from the sandstone more than a thousand years ago, as well as seeing interesting statues and ponds. The caves are often full of bats and geckos too! Sunsets in the park are spectacular in the clear air, with the dust contributing towards the redness of the amazing sunsets.
1 November 2014
DAY 7
We were very fortunate on a couple of occasions, when bear were found. The Sloth bear is a huge beast, weighing hundreds of pounds, but living mainly on termites and ants. They also eat honey, made famous by ‘Baloo’ in the jungle book. Baloo is also the Hindi name for this creature. The bears tear open tree stumps and logs to obtain ants and termites, and will climb up very tall trees to collect hives of honey. The tracks are huge, with prominent claws.

The Sloth bear has a beautiful yellowish ‘V’ on its throat

The track of the bear is very large, and rock bee hives are common in Bandhavgarh

2 November 2014
DAY 8
Today we spent our time in the Maghdi range, further out of the town of Tala. The birding on every drive has been amazing with many owls, parakeets and other wonderful species. Rollers and kingfishers were also seen often. Brown fishing owls are also common. This large owl sits patiently above a stream and fishes for its food, by either day or night. The jungle and spotted owlets were also very common, and seen by day. Rose-ringed, Plum-headed and Alexandrine parakeets were all seen during our drives, and were encountered singly or in flocks. Drongo varieties such as white-bellied, Black and Greater racquet-tailed were three of the prominent varieties.

A Rose-ringed parakeet and two Spotted owlets
A baby Cheetal and a running male Hanuman langur

3 November 2014
DAY 9
Another day of Safari, this time in Khitauli range. We travelled out of town for about twenty minutes on the partially completed new road, and went to the gates of the Magdhi range. This area is more open, giving better chances of Nilgai and Gaur. Birding was also very good, and produced some treasures. The Gaur is a very impressive animal, also known as the Indian bison. It weighs well over a ton, and the amazing bull we saw was certainly in this size class.

The huge Gaur, which weighs twice as much as an African buffalo and a curious Cheetal stag
Crested hawk-eagle eating an unfortunate peacock, and a Stork-billed kingfisher

A Nilgai cow in the morning mist and one of the thousands of butterflies we saw

An Indian roller and the track of an Indian hare

A shed antler of a Cheetal and a female Malabar pied hornbill

Each part of the park is different in terms of the animal densities and composition but we found all of them intriguing. The open meadows often were full of butterflies and dragon flies, creating great birding opportunities.
This drive was in the Tala area again, as it was our last full day in the reserve. We were hoping for a last chance of seeing tiger, but the main animal of the day was the elusive leopard. Ralph and Ginnie were very lucky and saw one of these elusive creatures on their evening drive, making us all very jealous. The wildlife performed beautifully, and the rollers were out in full force, we even saw a courting couple displaying for each other. Ralph and Ginnie also found another bear today...wow, what great luck!

The Kass grass, Ansar (our fantastic Indian guide) and David and Gilda preparing for the dust

A Red-wattled lapwing and a Muntjak, well hidden amongst the bamboo

One of the route markers which we followed and a bear walking casually past a Maruti Gypsy
5 November 2014
DAY 11
Our final morning before we headed to Delhi for our respective departures, and what a morning! We finally all got to see leopard together! It was a super sighting; we had more than twenty minutes of amazing viewing of this elusive big cat. It is always amazing how it happens on the last drive! Well, we headed off after breakfast to the town of Jabalpur, about three hours away, to fly up to Delhi. On the way we saw colonies of Indian flying foxes hanging in fruit trees. We also met up with several ceremonies and festivals, causing considerable delay! Once we arrived in New Delhi we set off on our respective journeys, Jacques to Ranthambore, Ginny, Ralph, David, Gilda, Gordon and Jonathan off to the Palace on wheels and Maggie and I were to overnight in New Delhi before flying to Dubai and then home to the USA and South Africa. Well. What a trip, and we hope to see you on the next journey!