



# THE AUSTRALIAN PIGEON CENTRE

*“Where Passion takes Flight”*

## **Interesting facts you may not know about Pigeons!**

By Barry Trewin

Pigeons are indeed fascinating creatures with a rich history and unique characteristics. As a historian, avian expert, military historian, and pigeon expert, I'll provide you with detailed information on various aspects related to pigeons.

### **1. Origins of Pigeons:**

The origins of pigeons can be traced back to the wild rock pigeon (*Columba livia*) found in Europe, North Africa, and parts of Asia. These birds are considered the ancestors of the domesticated pigeons we are familiar with today.

The wild rock pigeon is a medium sized bird with a slender body, long wings, and a characteristic rounded tail. It has a range of colour variations, including grey, white, brown, and black, with various patterns and shades. This species of pigeon thrives in rocky habitats, cliffs, and urban environments.

The domestication of pigeons began thousands of years ago, with the ancient Mesopotamians being credited as the first to undertake this process around 5,000 years ago. They recognised the utility of pigeons for their meat as a food source, as well as their ability to navigate and carry messages over long distances.

Through selective breeding, humans gradually developed distinct pigeon breeds with unique characteristics, such as specific colour patterns, feather shapes, and behaviours. This breeding process allowed for the emergence of various types of pigeons, each with its own purpose and appearance.

Over time, pigeons spread across different civilisations and regions, becoming integral to human society. Their exceptional homing instinct, navigational abilities, and remarkable flight capabilities made them valuable as messengers, particularly during times of war and communication challenges.

The domestication and selective breeding of pigeons led to the establishment of specialised breeds for various purposes. For instance, homing pigeons were bred for their ability to return to their home loft from faraway locations, carrier pigeons were used to carry messages, and fancy pigeons were bred for their aesthetic appeal in terms of coloration, feather patterns, and physical traits.

Today, pigeons are found worldwide, and they have adapted to various environments, including urban areas. They continue to be bred for racing, exhibition, and companionship. Pigeon enthusiasts and breeders strive to maintain and develop distinct pigeon breeds, ensuring the preservation of the rich diversity that has evolved over thousands of years.

In summary, the origins of pigeons can be traced back to the wild rock pigeon. The domestication process began thousands of years ago, with humans selectively breeding pigeons for different purposes, resulting in a wide range of breeds we see today. The cultural

significance and contributions of pigeons to human history make them a truly remarkable and fascinating bird species.

## 2. **History and Pigeon's Involvement with Humans:**

Pigeons have a long and significant history of involvement with humans, dating back thousands of years. They have played various roles and have been valued for their meat, companionship, communication abilities, and even their contributions during times of war. Let's explore the history of pigeons and their interactions with humans in detail:

**Domestication and Utilisation:** Pigeons were among the first birds to be domesticated, and this process started around 5,000 years ago. The ancient Mesopotamians recognised the usefulness of pigeons for their meat as a food source. They selectively bred pigeons for desirable traits, such as larger size and meat quality.

**Pigeons as Messengers:** One of the most well-known roles of pigeons throughout history has been as messengers. Their exceptional homing instinct and ability to navigate over long distances made them reliable couriers. Ancient civilisations, including the Egyptians, Greeks, Romans, and Persians, used pigeons to carry messages between cities, military outposts, and even during times of war.

**Pigeons in Warfare:** Pigeons have been extensively utilised during wartime. They were used for communication purposes, delivering messages across enemy lines or from the battlefield to command centres. Pigeons proved to be invaluable in situations where traditional communication methods were unreliable or vulnerable to interception.

**Pigeons in Scientific Research:** Pigeons have played a crucial role in scientific research, particularly in the field of behaviour and cognition. They have been used as subjects in numerous studies to understand learning, memory, navigation, and problem-solving abilities. Pigeons' intelligence and trainability have made them important contributors to our understanding of avian cognition.

**Pigeon Racing and Fancy Breeds:** Pigeon racing has been a popular sport for centuries. The development of specific breeds, such as homing pigeons and racing pigeons, has allowed for competitive races that test the birds' speed and navigational skills. Additionally, fancy pigeon breeds have been selectively bred for their unique and aesthetically appealing characteristics, making them highly sought after for exhibition and companionship.

**Symbolism and Cultural Significance:** Pigeons have held symbolic meanings in various cultures and religions. They have been associated with love, peace, and purity. In Christianity, pigeons are often depicted as representations of the Holy Spirit. Additionally, pigeon-related folklore and superstitions are prevalent in many societies, adding to the rich cultural significance of these birds.

**Pigeons in Art and Literature:** Pigeons have also made their mark in the world of art, literature, and popular culture. They have been depicted in paintings, sculptures, and poetry throughout history, symbolising different concepts such as freedom, loyalty, and communication.

The history of pigeons and their involvement with humans is extensive and diverse. From their domestication for food to their role as messengers, companions, and even research subjects, pigeons have left a lasting impact on human civilisation. Their intelligence, adaptability, and unique abilities have made them an integral part of our history and continue to captivate our fascination today.

### 3. Pigeon Manure and Gunpowder:

Pigeon manure, commonly known as guano, played a significant role as a valuable commodity in the production of gunpowder during the 19th century. Gunpowder, also known as black powder, is a mixture of sulphur, charcoal, and potassium nitrate (saltpetre). Saltpetre, in particular, was a crucial ingredient, and pigeon manure provided a rich source of this compound.

The high nitrogen content in pigeon manure made it an ideal source of saltpetre, which is a key component of gunpowder. Saltpetre is formed through the process of nitrification, where bacteria in the soil convert nitrogenous compounds into nitrates. Pigeon manure, due to its concentrated nitrogenous content, was an excellent raw material for saltpetre production.

To extract saltpetre from pigeon manure, a process called lixiviation was employed. The manure was collected and mixed with water to create a solution. This solution was then filtered to separate the liquid portion containing the dissolved saltpetre from the solid waste. The liquid was evaporated to obtain saltpetre crystals.

The collected saltpetre was then combined with sulphur and charcoal to create gunpowder. The sulphur acted as a fuel, the charcoal provided carbon for combustion, and the saltpetre supplied the necessary oxygen to sustain the chemical reaction required for the explosive properties of gunpowder.

Pigeon manure's significance as a source of saltpetre for gunpowder production was particularly relevant during times of conflict and war, when a reliable supply of gunpowder was crucial. The demand for saltpetre was high, and the availability of pigeon manure as a raw material made it a valuable resource.

It is important to note that the use of pigeon manure as a source of saltpetre for gunpowder production declined with the development of synthetic alternatives and the discovery of vast deposits of natural saltpetre in the mid-19th century. These advancements reduced the dependence on pigeon manure and shifted the production of saltpetre to more industrialised and efficient methods.

The historical use of pigeon manure in gunpowder production highlights the versatility and value of these birds beyond their traditional roles as messengers or pets. The unique properties of pigeon manure made it a valuable commodity, contributing to the technological advancements and military capabilities of the past.

### 4. Pigeons and the Olympic Games:

Pigeons have had a connection to the Olympics in the past, albeit not in a competitive sense. The use of pigeons during the opening ceremonies of the Olympic Games was a notable tradition that added symbolism and spectacle to the event. Some historical details of pigeons and the Olympics:

**Symbolic Release of Pigeons:** From the early 20th century until the 1992 Barcelona Olympics, the opening ceremonies often included a symbolic release of pigeons. This tradition aimed to represent peace, freedom, and unity. The release of the pigeons symbolised the athletes' journey from their respective nations to gather in a peaceful and harmonious sporting event.

**The Olympic Dove:** The dove, often portrayed as a white pigeon, has been a universal symbol of peace and goodwill. During the opening ceremonies, doves were released into the air, creating an impressive visual display. The image of these birds soaring together was meant to evoke a sense of global harmony and the ideals of the Olympic Games.

**Participation in Opening Ceremonies:** Pigeons were incorporated into the opening ceremonies in various ways. They were often released from specially designed cages or platforms located within the stadium. The birds would fly overhead, circling and creating patterns in the sky, providing a memorable spectacle for both the athletes and the audience.

**Transition to Artificial Doves:** In more recent Olympic Games, the use of live pigeons has been replaced by the use of artificial doves. Concerns arose regarding the safety and welfare of the birds, as well as their potential interference with the competitions. To address these issues, organisers opted for remote-controlled or mechanical doves that mimic the appearance of pigeons but are not live animals.

The symbolic connection between pigeons and the Olympics highlights the historical significance and cultural associations of these birds. While the release of live pigeons has evolved or been replaced in modern Olympic Games, the symbolism of peace and unity that pigeons represented in the past continues to be an integral part of the Olympic spirit.

## 5. Pigeons in the Military:

Pigeons have played a crucial role in wartime as reliable messengers and means of communication due to their exceptional homing instincts and navigational abilities. They were employed in various military operations, including reconnaissance, message delivery, and covert communications. Let's explore their use in wartime in more detail:

**Reconnaissance:** Pigeons were used for reconnaissance purposes during wartime. They were trained to fly over enemy territories, providing valuable aerial intelligence by observing enemy movements, troop positions, and fortifications. Pigeons were particularly useful in areas where traditional reconnaissance methods like aerial surveillance or advanced technology were not available or feasible.

**Message Delivery:** Pigeons served as messengers, carrying vital information across long distances during times of war. They were trained to deliver messages from the battlefield to command centres, headquarters, or other military units. Pigeons proved invaluable in situations where traditional communication methods were disrupted or unreliable, such as in areas with damaged telegraph lines or radio interference.

**Covert Communications:** Pigeons were also utilised for covert communications. In some cases, they were used to send secret or sensitive information that needed to be delivered discreetly. Pigeons provided a secure means of communication, as they could fly undetected through enemy lines, reducing the risk of interception.

**Pigeon Loft Networks:** Military organisations established networks of pigeon lofts, which served as bases for training, housing, and launching pigeons. These lofts were strategically located to ensure efficient communication between different military units and areas. Pigeon handlers, known as pigeon fanciers, were responsible for caring for the birds and training them for specific missions.

**Pigeon Cotes and Observation Posts:** Pigeon cotes, or specially designed structures, were used to house pigeons close to the frontlines. These cotes provided shelter, protection, and quick access to pigeons for message delivery during active combat situations. Observation posts were also established to monitor the arrival of pigeons, ensuring prompt retrieval and message dissemination.

**Pigeon Training and Handling:** Pigeons were extensively trained to navigate back to their home lofts over long distances. They were familiarised with their home location through repeated training flights. Pigeon fanciers developed techniques to ensure the birds' loyalty to their home loft, enhancing their reliability as messengers.

**Recognition and Awards:** Pigeons that displayed exceptional bravery and contributed significantly to military operations were recognised and awarded for their service. Medals and commendations such as the “Dickins” Medal for Bravery were given to pigeons and their handlers as a token of appreciation for their contributions in wartime.

The use of pigeons in wartime communication gradually declined with the advancement of technology, such as radio, telegraphy, and satellite communication. However, their role in history as dependable messengers and covert communication agents remains a testament to their remarkable abilities and the significant impact they had during times of conflict.

*Pigeons have been used in various wars throughout history. Here are some notable examples:*

**World War I:** Pigeons played a vital role as messengers during World War I. They were used by different countries involved in the conflict, including the United Kingdom, France, Germany, and the United States. Pigeons were instrumental in delivering messages across the trenches and battlefields, providing a reliable means of communication when other methods were unreliable or disrupted.

**World War II:** Pigeons continued to be used during World War II, particularly by resistance movements and clandestine operatives. They were employed for covert communication between occupied territories and allied forces. Pigeons carried critical information, such as intelligence reports, sabotage plans, and requests for assistance.

**Korean War:** Pigeons were utilised during the Korean War by both the United Nations forces and North Korean troops. They were used to relay messages between outposts, forward positions, and headquarters, particularly in rugged and mountainous terrain where traditional communication methods were challenging.

**Vietnam War:** Pigeons were employed by the United States military during the Vietnam War. They were used for communication between reconnaissance teams, Special Forces, and other units operating in remote and hostile areas. Pigeons provided a secure and reliable means of delivering messages in challenging environments.

**Falklands War:** During the Falklands War in 1982 between Argentina and the United Kingdom, pigeons were used by the British forces for communication purposes. The birds were carried on naval vessels and used to send messages from ships to mainland Britain, providing a backup method of communication in case of equipment failures.

It is important to note that pigeons have been used in numerous other conflicts and wars throughout history, often playing a critical role in delivering messages and providing communication capabilities in challenging and hostile environments. Their ability to navigate long distances and their reliability in delivering messages made them valuable assets in wartime.

## 6. **Pigeons and the Rothschild Bank:**

Pigeons were used by the Rothschild banking family to gain information which could affect markets.

Nathan Rothschild knew that early knowledge of the winner at Waterloo, details of the battle, the severity of the loser's defeat would be invaluable in financially manipulating markets to profit from the result. The family had invested heavily over the decades in field agents that

forwarded tips and messages, fast packet ships and trained carrier pigeons to speedily deliver notes.

The arrival of the carrier pigeons in London with specific battle results from Waterloo provided Rothschild the information he needed to begin to plant rumours. Initially he spread the word that the British had lost. Investors began to adjust their bond and security positions in reaction to this negative news. Rothschild took opposite positions, and then, he strategically released the actual truthful news that Wellington had vanquished Napoleon. This enabled the family to profit on both sides of the trades. It is estimated that the Rothschild family extrapolated an increase in wealth of 20 times their pre-war capital.

The foresight to train a winged air force of carrier pigeons proved fortuitous and extremely profitable for the banking house of Rothschild. The edge they enjoyed in receiving real-time information, and spectacularly profiting from the knowledge, became legendary and only increased the perception that they were a family of financial Merlin's. Their power and wealth has multiplied exponentially in the past 200 years and has been maintained to this very day.

## 7. Varieties of Pigeons:

Pigeons, as a diverse group of birds, exhibit a wide range of varieties with distinct characteristics and appearances. Here are some notable varieties of pigeons:

**Racing Pigeons:** These pigeons are bred and trained specifically for racing competitions. They possess exceptional homing instincts, endurance, and speed. Racing pigeons often have streamlined bodies, strong wings, and efficient respiratory systems to excel in long-distance flights.

**Fancy Pigeons:** Fancy pigeons are bred for their unique and ornamental features. They come in a wide array of colours, patterns, feather types, and body shapes. Some popular fancy pigeon breeds include Fantails (known for their fan-shaped tails), Jacobins (with extravagant feathered hoods), and Pouters (noted for their inflated crops during courtship displays).

**Tumbler Pigeons:** Tumbler pigeons have a distinct behaviour of tumbling or rolling backward in the air. This characteristic, known as "tumbling," is an inherited trait and a result of selective breeding. Tumbler breeds include Birmingham Rollers, Parlour Rollers, and Budapest Tumblers.

**Homing Pigeons:** Homing pigeons possess exceptional navigational abilities and are trained to return to their home lofts from faraway locations. They have a strong homing instinct and can find their way back using celestial cues, landmarks, and Earth's magnetic field. Homing pigeons have been used historically for message delivery and as a means of communication.

**Utility Pigeons:** Utility pigeons, also known as meat or squab pigeons, are bred for their meat. They are larger in size and have plump bodies. Squab, the meat of young pigeons, is considered a delicacy in some cuisines. Utility pigeon breeds include King Pigeons, Carneau Pigeons, and French Mondain Pigeons.

**Exhibition Pigeons:** Exhibition pigeons are bred for their aesthetic appeal and are showcased in bird shows and exhibitions. These pigeons often have unique colour patterns, feather shapes, and body structures. Exhibition breeds include Show Racers, Oriental Frills, and English Trumpeters.

There are numerous other pigeon varieties, and breed standards and preferences can vary across different regions and pigeon fancier communities. Pigeon breeding and pigeon fancying have a rich history, with enthusiasts continually working to develop new varieties with unique traits and appearances.

## 8. Pigeons and Royalty:

Pigeons have had a historical connection with royalty and nobility across different cultures and time periods. Here are some aspects that highlight the link between royalty and pigeons:

**Symbolism of Pigeons:** Pigeons have often been associated with qualities such as beauty, grace, loyalty, and peace. These qualities align with the ideals that many monarchies and nobility sought to portray. As a result, pigeons became symbolic animals in royal iconography and were featured in coats of arms, emblems, and artwork.

**Pigeon keeping as a Privilege:** In many societies, pigeon keeping was considered a prestigious hobby and a sign of wealth and status. The nobility and royalty often maintained elaborate pigeon houses or dovecotes within their palaces and estates. These structures were not only functional but also served as symbols of opulence and power.

**Carrier Pigeons for Royal Communication:** Pigeons were employed by royalty and nobility as messengers, particularly in situations where secure and swift communication was necessary. The exceptional homing abilities of pigeons made them valuable for sending confidential messages between different royal residences, military camps, or diplomatic envoys.

**Pigeon Racing as a Royal Pastime:** Pigeon racing, a sport that involves releasing pigeons at a specific location and timing their return to their home lofts, gained popularity among the nobility and royalty. Kings and queens, princes and princesses, and other members of the elite class often engaged in pigeon racing as a leisure activity, fostering friendly competitions among themselves.

**Royal Patronage of Pigeon Fancying:** Royalty, throughout history, has shown an interest in pigeon fancying. They have provided patronage and support to pigeon fanciers, breeders, and organisations. The royal support helped in the development and preservation of various pigeon breeds and contributed to the advancement of knowledge about pigeons.

It's important to note that the extent of pigeon involvement with royalty varied across different cultures and eras. Pigeons held symbolic and practical significance in the lives of monarchs and nobility, from their association with regal qualities to their use in communication and recreational pursuits. Today, the historical link between pigeons and royalty continues to be celebrated in various traditions and the ongoing appreciation of these remarkable birds.

## 9. Fascinating Colours of Pigeons:

Pigeons exhibit a fascinating array of colours and colour patterns, which add to their beauty and diversity. These colours are the result of various genetic factors and breeding efforts. Here are some details about the captivating colours of pigeons:

**Solid Colours:** Solid-coloured pigeons have a uniform colour throughout their feathers, without any noticeable patterns or markings. Common solid colours include white, black, blue, red, yellow, and brown. These solid colours can vary in shade and intensity, adding to the visual appeal of the pigeons.

**Bar Patterns:** Bar patterns are characterised by alternating bars of different colours across the feathers. The bars can be wide or narrow, and they create a striped appearance on the pigeon's body. The most common bar pattern is the "blue bar," which features alternating light and dark bars on a blue-coloured bird.

**Checkered Patterns:** Checkered patterns display a checkerboard-like arrangement of squares or rectangles on the pigeon's feathers. The squares can be of different colours, resulting in striking contrast and visual interest. Checkered patterns are often seen in breeds like Saddle Homers and Mookees.

**Ticking and Grizzle Patterns:** Ticking refers to small spots or flecks of colour scattered throughout the pigeon's feathers. Grizzle patterns create a grizzled or speckled appearance. These patterns can be seen in various colours, and they add depth and texture to the pigeon's plumage.

**Spread Patterns:** Spread patterns are characterised by the distribution of colour across specific areas of the pigeon's body, such as the wings or tail. Examples of spread patterns include spread black, spread red, or spread yellow. These patterns can create striking contrasts and unique colour combinations.

**Lacing and Lacewing Patterns:** Lacing patterns feature a border or edging of a different colour around the edges of the feathers, creating a lacy or fringed appearance. Lacewing patterns, on the other hand, exhibit a combination of solid and lacing patterns, resulting in intricate and beautiful feather designs.

**Dilution and Recessive Colours:** Dilution colours are the result of genetic dilution, which causes the pigments to be lighter or paler than usual. Recessive colours occur due to recessive genes and produce unique colours like recessive red, recessive yellow, or recessive opal. These colours are often rarer and highly prized among pigeon enthusiasts.

**Iridescent Colours:** Some pigeons exhibit iridescent colours, which appear to change or shimmer depending on the angle of light. These colours are the result of structural coloration rather than pigmentation. When light interacts with the microscopic structures of the feathers, it creates a dazzling display of iridescence.

It's important to note that pigeon colours can vary within different breeds and individual birds, and pigeon fanciers and breeders continually work to enhance and develop new colour variations through selective breeding and genetic manipulation. The remarkable colours of pigeons contribute to their allure and make them a visually captivating and diverse group of birds.

## 10. **Pigeons and how they Drink:**

Pigeons have a unique way of drinking water that sets them apart from other birds. Unlike most birds that tilt their heads back to swallow water, pigeons have the ability to suck up water using their beaks, similar to how humans use a straw. This distinctive drinking behaviour is made possible by a specialised adaptation in their beak structure.

The beak of a pigeon contains a soft, fleshy structure called the "pigeon crop," located in the throat region. The crop acts as a temporary storage pouch for food and water. When a pigeon drinks, it fills its beak with water and then uses its tongue to create a suction motion, drawing the water into the crop. The pigeon can control the flow of water by manipulating the muscles in its throat and tongue.

Once the water is collected in the crop, the pigeon can then swallow it at its own pace. This unique method allows pigeons to drink more efficiently and in larger quantities compared to other birds. It is particularly advantageous in arid environments or when water sources are scarce, as pigeons can quickly hydrate themselves.

The ability of pigeons to suck fluid when they drink is not commonly seen in other bird species. Most birds rely on gravity to facilitate the flow of water down their throats by tilting their heads back, using the force of gravity to move the water into their oesophagus. Pigeons, however, have evolved a specialised adaptation to draw water into their crop, providing them with a more flexible and efficient means of drinking.

It's important to note that while pigeons have this unique drinking behaviour, it does not mean that they exclusively use this method. Pigeons are adaptable birds and can also drink water using the traditional method of tilting their heads back. The ability to suck fluid is just one of the distinctive characteristics that make pigeons fascinating creatures in the avian world.

## 11. Pigeon Mating and Pairing for Life:

Pigeons are known for their monogamous mating behaviour, forming long-term pair bonds with their mates. The process of finding a mate and pairing up for life involves several behaviours and rituals. Here's a detailed explanation of how pigeons find their mate and establish a lifelong partnership:

**Courtship Displays:** Pigeons engage in elaborate courtship displays to attract potential mates. The male pigeon initiates the courtship by puffing up its chest, cooing, and bowing its head. It may also perform aerial acrobatics, such as flying in circles or making steep dives, to impress the female. The male displays its physical prowess and attractiveness through these behaviours.

**Nest Selection:** Once the male pigeon has successfully courted a female, they work together to select a suitable nest site. Pigeons build their nests in protected locations such as tree cavities, ledges, or on building structures. Both male and female pigeons contribute to constructing the nest, using twigs, leaves, and other available materials.

**Incubation and Shared Parenting:** After the nest is established, the female pigeon lays one or two eggs, which both parents take turns incubating. The incubation period typically lasts around 17 to 19 days. Both male and female pigeons share the responsibility of incubating the eggs and raising the babies called "Squeakers".

**Pair Bonding:** During the incubation period and after the eggs hatch, the pair bonding between the male and female pigeon strengthens. They engage in mutual preening, where they groom each other's feathers, reinforcing their bond and promoting social bonding.

**Feeding and Rearing Squeakers:** Once the eggs hatch, both parents collaborate in feeding and caring for the squeakers. They produce a substance called "pigeon milk" in their crop, which is regurgitated and fed to the young ones. As the chicks grow, both parents take turns foraging for food and returning to the nest to feed the chicks.

**Life Long Partnership:** Pigeons exhibit a strong fidelity to their mates. Once a pair bond is formed, it usually lasts for life. Even during non-breeding seasons, pigeons often stay together as a pair, maintaining their bond and returning to the same nest site year after year.

The monogamous nature of pigeons and their commitment to their partners is believed to be advantageous for successful reproduction and raising offspring. The shared responsibilities of nesting, incubation, feeding, and rearing contribute to the overall reproductive success of the pair.

It's important to note that while pigeons generally exhibit monogamous behaviour, exceptions can occur, especially in cases where a mate is lost or when an individual fails to find a suitable partner. However, the majority of pigeons do form long-term pair bonds, displaying loyalty and commitment to their chosen mates throughout their lives.

## 12. Caring and Affectionate Nature of Pigeons:

Pigeons are social birds that exhibit various caring behaviours towards their mates and flock members. One behaviour that is often observed among pigeons is "billing" or "kissing," which involves the touching of beaks between individuals. This behaviour is an important aspect of their social interactions and serves several purposes:

**Bonding and Affection:** Pigeons use kissing as a means of showing affection and strengthening their social bonds. When pigeons engage in kissing, they gently touch their beaks together, often accompanied by cooing sounds. This behaviour is a display of trust, affection, and closeness between the individuals involved.

**Pair Bonding:** Kissing is particularly common between pigeon mates. Pigeons in a pair bond engage in mutual preening and billing to reinforce their bond. It helps in maintaining the strong connection and communication between them, solidifying their relationship as caring partners.

**Reconciliation:** Pigeons use kissing as a means of reconciliation after conflicts or disagreements. If two pigeons have had a dispute, they may engage in kissing as a way to restore harmony and reaffirm their social bond. It serves as a peaceful gesture and helps to diffuse tension within the group.

**Communication:** Kissing behaviour also plays a role in communication among pigeons. It can convey various messages, such as signalling submission, reinforcing social hierarchy, or indicating a desire for affiliation. Pigeons have complex social structures, and billing serves as a nonverbal form of communication within their social network.

The act of kissing is a gentle and intimate behaviour that highlights the caring nature of pigeons. It demonstrates their social bonds, affection, and ability to engage in complex social interactions. Through kissing, pigeons establish and maintain relationships, express emotions, and promote social harmony within their flock or pair bond.

## 13. Intelligence of Pigeons:

Pigeons are often underestimated when it comes to their intelligence, but they possess remarkable cognitive abilities and have demonstrated intelligence in various tasks and experiments. Here are some key aspects that showcase the intelligence of pigeons:

**Navigation and Homing Abilities:** Pigeons are renowned for their exceptional navigational skills. They have a remarkable ability to find their way back home from unfamiliar locations, even over long distances. They use a combination of visual cues, landmarks, sun compass, and Earth's magnetic field to navigate accurately. Studies have shown that pigeons can also memorise and recognise different routes, demonstrating their spatial memory and cognitive mapping abilities.

**Problem-Solving Skills:** Pigeons exhibit problem-solving abilities in experimental tasks. They can learn to associate specific cues with rewards, such as pecking a particular button or lever to obtain food. Pigeons have shown the ability to learn complex tasks, discriminate between different shapes, colours, and patterns, and generalise their learning to new situations.

**Memory and Recognition:** Pigeons have impressive memory capabilities. They can remember specific locations, objects, and landmarks over extended periods. Pigeons have been trained to recognise and remember hundreds of images, demonstrating their visual memory skills. They can also recognise human faces and discriminate between familiar and unfamiliar individuals.

**Numerical Abilities:** Pigeons have shown the ability to understand and discriminate between different numerical quantities. In experiments, pigeons have been trained to distinguish between varying numbers of objects or symbols and can accurately perform tasks involving numerical cognition.

**Self-Recognition:** Pigeons have displayed self-recognition in mirror experiments, suggesting a level of self-awareness. They can recognise themselves in mirrors and understand that the reflection represents their own body. This ability is considered a significant indicator of higher cognitive functioning.

**Social Intelligence:** Pigeons exhibit social intelligence, understanding and responding to the behaviours and signals of other pigeons. They can recognise individuals within their flock, establish hierarchies, and adjust their behaviour based on social interactions. Pigeons display cooperative behaviours, such as sharing nesting and parenting duties, which require social coordination and understanding.

**Tool Use:** Although not as extensively studied as in some other bird species, pigeons have demonstrated tool-use behaviours in experimental settings. They can learn to use simple tools, such as sticks or pebbles, to retrieve out-of-reach rewards.

These examples above highlight the intelligence and cognitive abilities of pigeons. Their capacity for spatial orientation, problem-solving, memory, numerical cognition, self-recognition, social interactions, and tool use indicate a higher level of cognitive processing. Pigeons' intelligence is not on par with that of some primates or dolphins, but their adaptability, learning capabilities, and ability to thrive in various environments attest to their impressive cognitive abilities within the avian world.

#### 14. Pigeons a Symbol of Peace:

Pigeons have long been associated with symbols of peace and love in various cultures around the world. This association is rooted in their behaviour, appearance, and historical significance. Here's a detailed explanation of how pigeons have become symbols of peace and love:

**Historical Significance:** Throughout history, pigeons have played a significant role in communication, particularly as messengers. Their ability to return to their home roost made them valuable for delivering messages during times of conflict or war. Pigeons carrying messages of peace were seen as symbols of hope, reconciliation, and a desire for peaceful resolutions.

**The Dove Symbolism:** The connection between pigeons and peace is often attributed to the white dove, which is a variety of domestic pigeon. The white dove, with its pure white feathers, has been a symbol of peace in many cultures. It is often associated with concepts like purity, innocence, and harmony. The biblical story of Noah's Ark, where a dove returns with an olive branch, symbolises the end of the flood and the restoration of peace.

**Universal Peace Symbol:** Pigeons, specifically doves, have become widely recognised as a universal symbol of peace. This recognition is reinforced by their portrayal in various artworks, religious texts, and peace movements. The image of a dove carrying an olive branch has become an iconic representation of peace and is often used in flags, emblems, and peace-related events.

**Love and Romance:** Pigeons are also associated with love and romance. In many cultures, they are regarded as symbols of fidelity, loyalty, and devotion. Pigeons' monogamous behaviour, where they mate for life, is often seen as a representation of lasting love and commitment. Pigeons' gentle and caring behaviours towards their mates, such as billing and mutual preening, further contribute to their symbolism of love and affection.

Cultural References: Pigeons' symbolism of peace and love is reflected in various cultural references. For example, in Greek mythology, Aphrodite, the goddess of love, is often depicted with doves symbolising love and beauty. In art and literature, pigeons have been depicted as messengers of peace and as symbols of love, often featured in romantic poems, paintings, and sculptures.

Peace Movements: Pigeons have also been associated with peace movements and activism. In the 20th century, the image of a dove became strongly linked with peace protests, particularly during the Vietnam War era. Pigeons were released during peace rallies as a symbolic gesture of nonviolence and a call for peaceful resolutions.

The symbolism of pigeons as symbols of peace and love resonates across cultures and has stood the test of time. Their association with peace, hope, reconciliation, and love stems from their historical significance, cultural references, and the universal symbolism attached to doves. Pigeons' gentle nature, monogamous behaviour, and their role in communication have made them enduring symbols of peace and love worldwide.

*Pigeons are remarkable creatures that have formed intricate connections with humans throughout history. From their origins as wild birds to their involvement in warfare, their close relationship with royalty, and their unique characteristics, pigeons continue to captivate us with their beauty, intelligence, and remarkable abilities.*