

## Dovecotes: From Rural Tradition to Modern Architectural Vision

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### ABSTRACT

*Dovecotes are among the most distinctive expressions of rural architecture in many European and non-European landscapes, precious evidence of the centuries-old intertwining of architecture, landscape and agricultural traditions. This proposal aims to investigate this architectural typology in the Euro-Mediterranean and Middle Eastern areas, in order to highlight its main characteristics, the materials used and the most common building types. The methodology adopted is based on the study of historical and literary sources, architectural and agricultural treatises, and pigeon protection regulations. The ultimate aim is to understand the role that these structures can still play in the contemporary world. Through the analysis of a number of contemporary projects inspired by dovecotes, the contribution prompts critical reflection on the potential contribution of these structures to the development of a vision of architecture in dialogue with the local ecosystem.*

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### 1. Introduction

A dovecote is a typically rural agricultural structure used for raising pigeons, found in many regions both within and outside Europe. The presence of these structures in such diverse geographical contexts attests to the variety of functions and values they have served over the centuries: valuable economic resources within the agricultural system, defensive outposts for controlling the territory, and expressions of the owner's power and prestige.

Pigeon breeding, documented since ancient times, was, in fact, a fundamental component of the economic system in many regions because it ensured an abundant supply of meat with unique nutritional benefits and the production of palombino, an excellent fertilizer derived from pigeon droppings and used to improve soil fertility. For these reasons, ownership of a dovecote was among the feudal rights reserved for the aristocratic elite, a prerogative that remained unchanged over time. Peasants, on the other hand, were permitted to raise only a few dozen pigeons in small, makeshift

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enclosures set up inside stables, attics, and barns.

This paper aims to examine the architectural manifestations of this phenomenon in the Euro-Mediterranean and Middle Eastern contexts, proposing a classification of the main architectural types and comparing them to highlight recurring formal and structural elements as well as local specificities.

In an effort to reconstruct the typological evolution of these structures and to understand the design choices made, this study began with an analysis of both historical sources and treatises in the field (treatises on agriculture and architecture, with particular attention to the sections on vernacular architecture): from Varro and Columella in antiquity, to Pietro de' Crescenzi in the Middle Ages, up to Palladio, Tanara, and Viollet-le-Duc.

After a long period during which this model was widely adopted, beginning in the 19th century, the evolution of agricultural techniques, the advent of chemical fertilizers, and the abolition of feudal rights led to the gradual abandonment of these structures. Some have been lost, and many others remain in a state of neglect and disrepair, forgotten in the landscape.

Long considered obsolete structures, the recent proliferation of studies - especially at the local level - has contributed to a general reevaluation of these architectural assets. To date, however, there has been no wide-ranging study capable of analyzing the phenomenon in its entirety, across various regions. The aim of this paper is to fill this gap by first presenting an analysis of historical sources and scholarly treatises in the field and, finally, a classification of the main architectural typologies within the Euro-Mediterranean and Middle Eastern contexts, comparing them to highlight recurring formal and structural elements as well as local specificities.

## 2. The Dovecote in Architectural Treatises

The study of historical and literary sources is essential for a thorough understanding of the evolution of dovecote designs and the various functions to which these buildings were adapted according to the economic, social, and productive needs of each era.

The most significant accounts from the Roman world are found in Varro's *De re rustica* (116–27 B.C.). The scholar from Rieti provides a description of two types of dovecotes: a tower-like structure, built atop the roofs of dwellings, and another with a circular plan, constructed as a freestanding building capable of housing up to five thousand birds (Varro, 1846/trans. Canal).

It is confined to a kind of building that some call a *peristeona* and others a *peristerotropheion*. Often, as many as 5,000 are kept in one of these places. Such buildings must be covered like a large dome; they must have only one narrow door and windows in the Carthaginian style—or wider ones with grilles on both the inside and outside—so that the entire space is well-lit and no snake or other harmful animal can enter. All the interior walls and vaults are plastered with crushed marble; this plaster is made as smooth as possible. The same is done externally around the windows to prevent mice or lizards from clinging to the “eyes” of the dovecote, for there is no animal more timid than the dove. For each pair of pigeons, round, thick “eyes” (nests) are arranged in orderly rows: there can be many such rows, starting from the floor all the way up to the vault. Each “eye” must be three palms wide internally in every direction, and its entrance must be such that the pigeon can enter and exit. Beneath each row of nests, small platforms two palms wide are attached to the walls; these serve as a vestibule where the pigeons can rest before entering the nests (Ghigi, 1950, pp. 257–259).

The same architectural solutions can be found in Lucius Columella's *De re rustica* (4–70 CE) and in the *Opus agriculturae* by Rutilius Palladius, an agronomist of the 4th–5th centuries CE. These authors do not provide further details but merely suggest the optimal layout of the rooms and emphasize hygiene and protection against predators.

During the Middle Ages, reconstructing a clear picture of the typological evolution of dovecotes proved to be a difficult and problematic task due to the scarcity of surviving documents. It is possible that pigeon breeding during these centuries continued using the structures and techniques developed in Roman times.

In the Italian countryside, the model of the rural tower-dovecote house became established—a multi-story structure designed to serve multiple functions: residence, defense, manure production, and tool storage.

The only medieval source on this subject comes from Pietro de' Crescenzi (1233–1321), who updated the Latin agronomic tradition with elements of feudal practice and offered practical advice for building a dovecote.

Dovecotes can be built in two ways: either atop columns with walls made of timber, masonry, or rounded stones, or atop a tower with thick masonry walls, and each may have nests both inside and outside in holes. (De Crescenzi, 1805, pp. 156–157)

During the same period, the house-tower-dovecote type coexisted with single-purpose dovecote towers—found in some Cistercian grange complexes—and with defensive towers, located either inside or outside the walls of urban centers, whose top floor was used for raising pigeons.

Some references to dovecotes are found in municipal statutes, which at times reveal significant previously unknown details. The regulations were aimed at combating illegal hunting, preserving game, and ensuring its abundance. In some cases, this protection extended even to buildings used for breeding, partly because the term “dovecote” found in these archival documents is often very generic and refers to various types of structures.

For example, in certain documents from 1445, the Countess of Lecce, Maria d'Enghien, decreed “that no person shall dare to kill or hunt with a crossbow or bow the pigeons of a dovecote, nor capture said pigeons with traps or snares, unless they are the owner” (Muratore, 1991, p. 113).

Starting in the sixteenth century, sources become significantly more numerous and offer much richer information. The topic is given ample attention in both architectural treatises and agricultural literature, and the dovecote began to be increasingly identified with the isolated tower.

On the international scene, the Parisian physician and printer Charles Estienne, in *Predium Rusticum*, explains that these buildings are towers constructed above the facade of the villa's main structure and that, in France, ownership of such structures is the exclusive prerogative of feudal lords (Estienne, 1554).

The Spanish agronomist Alonso de Herrera describes a tower model “built like a house at the top of it” or “above pillars with wooden or stone columns” (Herrera, 1583). This latter type, raised on stilts, is particularly widespread in certain southern regions of France and in Catalonia, and provides insulation from moisture and greater protection from predators.

No less important are the references made by Italian Renaissance treatise writers. Andrea Palladio also addresses the topic of dovecotes, specifying: “The quarters for livestock, such as pigs, sheep, pigeons, poultry, and the like, should be arranged according to their qualities and natures, and in this regard, one must take into account the customs of different regions” (Magagnato & Marini, 1980, p. 145).

In Palladian villas—busy centers of agricultural production—dovecotes are positioned at the ends of or along the barchesse, that is, the side wings branching off from the central body.

This recommendation is echoed by Vincenzo Scamozzi, architect and intellectual heir to Palladio, who suggests placing dovecotes in a location set apart and secluded from the villa, in more isolated and quiet spots. Vincenzo Tanara, too, in his treatise *L'economia del Cittadino in Villa*, recommends situating the dovecote at a distance from the rest of the dwelling to preserve the tranquility of the surroundings (Tanara, 1651).

In this brief overview of sources related to dovecotes, it is finally worth mentioning Eugène Viollet-le-Duc, who devotes an extensive section to this topic in his *Encyclopédie Médiévale*. The French architect documents several surviving examples built during the 14th and 15th centuries and analyzes the main architectural differences between dovecotes in northern France and those found in the southern regions (Viollet-le-Duc, 1854).

### 3. Main Architectural Types of Dovecotes

In the area under consideration—the Euro-Mediterranean and Middle Eastern region—three main types of structures used for raising pigeons have been identified: rock-cut dovecotes, isolated tower dovecotes and those attached to or integrated into other buildings.

#### 3.1. Rock-cut dovecotes

Even before the construction of specific structures for raising pigeons, natural cavities served as a primitive solution for spaces dedicated to this practice. By taking advantage of the ethology of this bird—which, in the wild, nests inside rocky crevices—humans have sought to recreate an environment as faithful as possible to its natural habitat. These cavities are generally found near a populated area or at the foot of a rocky slope. In many cases, they are located in the immediate vicinity of a watercourse, which ensures an independent water supply for the birds. The interior walls have been carved out to create niches for laying eggs, and appropriate functional measures have been taken for the collection of guano.

This type is widespread in various parts of the world and exhibits a wide range of variations depending on the geomorphological characteristics of each region. The rural area of Tuscia, in northern Lazio, Italy, is among the regions with the highest concentration of rock-cut dovecotes (fig. 1). These structures, carved into very friable tuff and often connected by tunnels, feature nearly square niches arranged in multiple rows (Grano & Di Giuseppe, 2022). The presence of this type of structure is also widely documented in another Italian region, Puglia, specifically in the provinces of Lecce and Taranto, as well as in the Matera area, where these structures were integrated into the daily life of rock-cut villages (Foschino & Paolicelli, 2019).

In Sicily, there are no documented cases in the literature of artificial cavities used exclusively for pigeon breeding. However, some recent studies have identified the presence of quadrangular or rectangular chambers distributed across multiple levels in the rock-cut environments of Calascibetta and Enna, in central Sicily, which, in terms of shape and size, are comparable to the niches of rock-cut dovecotes found in other areas of the Italian Peninsula (Bonanno & Cugno, 2022).

A region particularly rich in rock-cut structures is Cappadocia, in central Turkey, where the shape of the niches in some dovecotes bears striking similarities to those in Tuscia (fig. 1) (Bixio et al., 2023a). In this area, known worldwide for its extraordinary natural landforms, thousands of dovecotes (Güvercinlik) have been built into the characteristic tabular rock outcrops and soft tuff pinnacles.

These sites were excavated during the Byzantine period and later altered during the Seljuk and Ottoman eras, in an area of approximately 20,000 square kilometers of volcanic rock at an elevation of 1,000–1,500 meters above sea level (Bixio et al., 2023a).

Although they are still recognizable today by the openings along the walls of pinnacles and cliffs, a significant portion has now collapsed as a result of thermoclastic and erosive processes. The niches are shaped like round arches, stilted arches (or extended arches) or lunettes. Quadrangular niches—whether flat or with semicircular vaults—are also very common (Bixio et al., 2023b). In some cases, the entrances to the dovecotes are painted with depictions of animals, plants, human figures, geometric patterns, or are simply whitewashed. Local artists created these symbolic decorations using naturally derived colors, such as *yaşa*, and other plant-based pigments (Amirkhani et al., 2010).

In Maresha, Israel—a famous archaeological site that is now part of the Beit-Gruvin-Maresha National Park—there is also evidence of numerous underground dovecotes, which are conceptually very similar to those found in Turkey and date to the 3rd–2nd centuries B.C. (fig. 1).

In this area, pigeon breeding not only provided a supply of fresh meat for consumption but also ensured a supply for sacrifices at the Holy Temple in nearby Jerusalem. The National Park currently comprises 85 dovecote caves, with a total of 50,000–60,000 niches (quadrangular, trapezoidal, or triangular in shape), and it is possible that many more existed in the past.



**Figure 1.** On the left, an example of a rock-cut dovecote in Lazio (Italy).

Source: <https://www.iluoghidelsilenzio.it/grotta-delle-monache-vasanello-vt/>; in the center, rock structures used for raising pigeons near the cultivated areas of Uçhisar, Nevşehir, Cappadocia (Source: A. Bixio et al., *Rock-cut Dovecotes in Cappadocia: Elements in Comparison*, Genoa 2023, p. 3); on the right, rock-cut dovecote at the archaeological site of Beit Guvrin–Maresha, a UNESCO World Heritage Site (Source: Wikimedia Commons)

### 3.1.1. Rock-cut dovecotes surmounted by a tower

A particularly rare variation of the first type consists of dovecotes divided into two distinct sections: an underground chamber, with niches carved into the rock, surmounted by a masonry structure, typically a tower. The most numerous examples of this hybrid type are documented in the vicinity of Gesi, in Central Anatolia, where the unique topography of the area necessitated the adoption of these mixed structures (Fig. 2) (Özen, 2012).

The underground section, with a square, rectangular, or circular floor plan, contains hundreds of carved niches of various sizes (Amirkhani et al., 2010). The towers (*burç*), built above the central space, are between 1.5 m and 4.5 m wide and sometimes reach a height of 4 meters. They are all constructed of cut stone or rubble stone. The opening at the top allows pigeons to enter and provides light and ventilation to the compartment below. The opening has a diameter ranging from 100 cm to 150 cm (İmamoğlu et al., 2005).



**Figure 2.** Pigeon coops in the vicinity of Gesi, Kayseri, Turkey. Source: Türkiye Kültür Portalı, Kayseri Provincial Directorate of Culture and Tourism, <https://www.kulturportali.gov.tr/turkiye/kayseri/gezilecekyer/gesi-baglari-ve-guvercinlikler>

The distinctive nature of this characteristic yet complex mixed system of the Gesi dovecotes is virtually unique within the broader context under consideration. A similar example can be found in the dovecote at Masseria Pinta, in the countryside around Otranto (Lecce, Italy). The underground section features a distinctive cruciform plan, and at the intersection of the arms—above a large central opening—there is a domed roof supported by a low drum and surmounted by a circular crenellated structure (Rossi, 2012, p. 162). The underground structure, discovered only in 1976, was most likely originally a Messapian settlement used for funerary purposes. In the 17th century, after part of the vault collapsed, a tower was built, which was also used for raising pigeons.

### 3.2. Isolated tower dovecotes

Tower-style dovecotes, standing alone in agricultural settings, are the most common architectural type among buildings used for raising pigeons. In line with the recommendations of ancient treatise writers, particular attention was paid to selecting the most suitable site to ensure easy access for the pigeons and to limit their exposure to predator attacks. For these reasons, dovecotes were built in open areas, on slopes, sheltered from strong winds, and, whenever possible, near water sources. The south-facing orientation allowed the sun to penetrate and warm the interior on colder days, thus ensuring a warm and dry environment, which is essential for the pigeons' health.

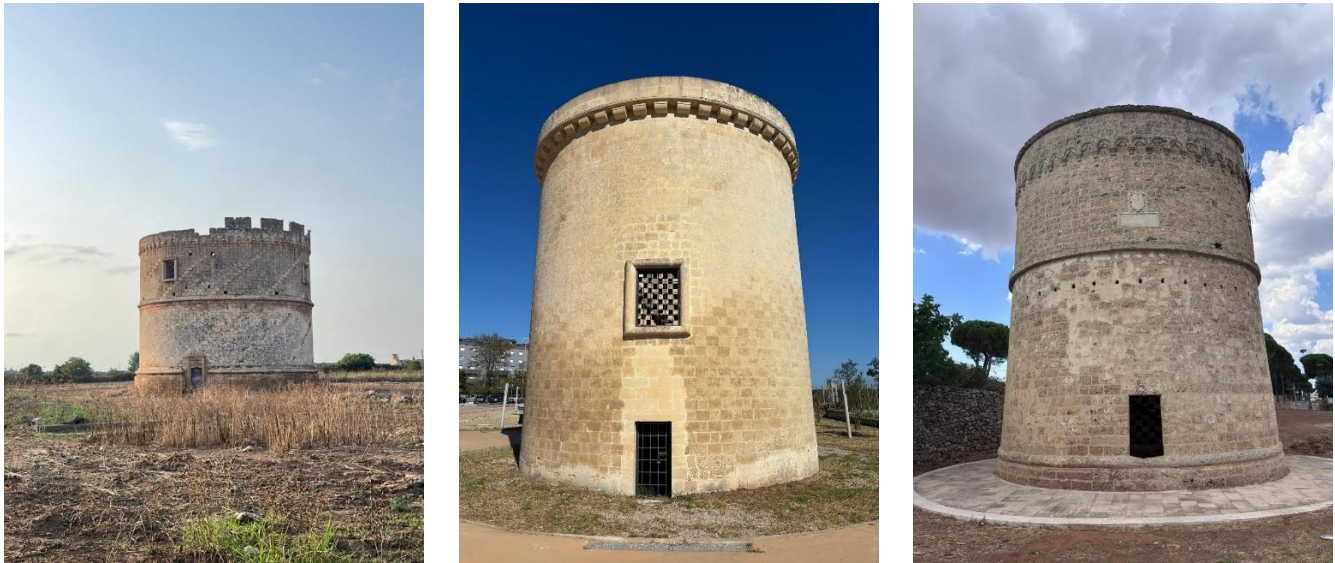
In Italy, this type of dovecote is found primarily in the Salento region, in the south of the country, where the practice became extremely widespread beginning in the 15th century. There are two types of designs: the more common circular plan and the quadrangular plan. The construction method is similar in both: the niches are carved into the thickness of the walls, making use of the empty space—about 22–25 cm—created by the staggered arrangement of the ashlar.

The openings face east in most cases; in a few instances, they face north or south, but never west. With the exception of a few examples from a later period, these structures are always open-air. The absence of a roof is a unique feature of Salento dovecotes, not found in any other context. This design ensured better ventilation of the structure and facilitated the pigeons' entry, though it also exposed them to attacks by predators. It is therefore possible that the presence of such predators in these areas was relatively scarce, to the point that a system of protection from above was not required.

Furthermore, there is little attention paid to the care and finishing of the interiors: there are no plastered sections, no protective systems for the nesting cavities, no specific measures for collecting bird droppings, and no perches for the birds.

The materials used are of local origin: tuff and Lecce stone, the latter used primarily for decorative elements. Finally, polychromatic effects are completely absent. The only chromatic variation is created by the alternation of stone blocks which, although made of the same material, often came from different quarries or from different layers of the same quarry. The decorative elements are concentrated at the top, along the cornices or above them, in the crowning elements. These come in numerous variations: from simple battlements, based on medieval curtain walls, to more elaborate battlements connected by an upper cornice or arranged in a stepped pattern, to simple spires, truncated pyramids, pointed arches, and arched structures, all the way to systems of spires and pinnacles topped by spheres or pointed elements (Rossi, 2012).

Although the freestanding tower dovecote is a phenomenon typical of the Salento region, other similar structures belonging to this typology can be found throughout the rest of Italy. This is the case, for example, with the dovecotes incorporated into the "villas of delight" along the coast of the Gulf of Naples, dating from the late 18th century and designed by renowned architects (such as Muzio Nauclerio and Luigi Vanvitelli). In this context, the dovecotes are conceived more as elements of decoration and prestige than for practical use, reflecting a desire for a spectacular and refined display (Robotti, 2009).



**Figure 3.** Dove towers in the province of Lecce, Italy. Source: Author's archive, 2025

In France, the wide variety of local laws governing pigeon ownership led to a varied distribution across the country. The significant presence of dovecotes in the southern regions, particularly in Provence, is due, for example, to the lack of specific building restrictions and the freedom granted to local residents to erect these structures as they pleased.

The marked dependence on wheat cultivation—a free source of sustenance for pigeons—explains the abundance of dovecotes in grain-growing regions: they are rare in Brittany, a very arid region; numerous in the fertile Normandy; relatively few in Central France; and found in large numbers in Languedoc and the Périgord. In the valleys and on the plateaus of Provence, where the fields were devoted to wheat cultivation, the number of dovecotes was very high. This varied geographical distribution is matched by a remarkable variety of architectural and decorative styles, with numerous regional variations.

The circular shape is the most common and best suited to accommodate the potence system, a rotating mechanism attached to a central shaft to which circular rotating ladders are hooked (Fig. 4). This particular system, developed in France and later adopted in England and Scotland, allowed the caretaker to easily reach all the nests in the dovecote (Levillain-Hubert, 2001). The largest structures have a diameter ranging from 8 to 10 meters and a height exceeding 8 meters. The quadrangular shape, very common in Provence, has a more understated appearance and is generally shorter in height. Some dovecotes have a polygonal floor plan, with a hexagonal or octagonal base, and are highly prized for their aesthetic appeal. The materials used for construction were sourced locally or nearby and were rarely imported from other regions. Stone was used either in its raw form or cut for arches and pillars. Wood (from oak, chestnut, beech, walnut and elm trees) was used for doors, window frames, and floors.

Some half-timbered dovecotes were filled using the torchis method, consisting of wood and a mixture of straw and clay, the latter highly valued for its thermal and acoustic properties. Pigeons entered through flight grilles, made of wood, plaster, stone or brick and set slightly back from the facade (Fig. 4). The holes take various shapes (round, diamond-shaped, star-shaped) for purely decorative purposes. In Provence, the grilles are often framed by glazed tiles in red, yellow, green, and blue (Chausserie-Laprée, 1983).

In some dovecotes, particularly in Normandy and Brittany, the nests are not carved directly into the walls; instead, nest boxes are inserted into the masonry. In Haute-Provence and neighboring regions, some nests consist of terracotta pots (*toupines*) stacked one on top of the other. Nests made of woven wicker baskets, hung on the wall with nails on wooden beams, are less common.

The exterior walls of many dovecotes are encircled, at various levels, by projecting brick or stone cornices—called *randière*—that run along the perimeter. These bands consist of a row of flat stones or small glazed tiles, secured with cement or iron rivets. In addition to their ornamental function, they served as a barrier against predators attempting to climb the walls.

To provide insulation from ground moisture and ensure greater protection from predators, many dovecotes were built on pillars, columns, and arches: veritable monuments, ranging from 10 to 12 meters in height (fig. 5). They are very common in the Midi-Pyrenees and Aquitaine and are supported by four, six, eight, or nine stone columns, topped with Doric capitals arranged upside down. Because of its characteristic shape, this element is called a “mushroom” or “hat” (Rossi, 2012). The floor plan is quadrangular, and in the most elaborate examples, hexagonal or octagonal in base. The upper quadrangular enclosure, known as the “aviary,” is constructed of masonry (sandstone, brick or limestone) or wood. The infill consists of wattle and daub, rammed earth, or fired bricks.



**Figure 4.** On the left, a circular brick dovecote with a triple randière, topped by a lantern with a flight grille, Château Rouge, Haute-Garonne (France). Source: <https://www.alaingillodes.fr/>; in the center: various examples of flight grilles. Source: <https://pigeonniers-et-colombiers-de-france.webador.fr/>; on the right: a spiral staircase in the Villesavin dovecote, restored in 2019. Source: Wikimedia Commons

Arched dovecotes are supported by four pillars and feature a pyramidal roof, often crowned by a lantern. Among the main local variations, the mule's foot dovecote is very common in the Toulouse and Montauban areas and is therefore also known as the Toulouse-style dovecote. It is characterized by the distinctive shape of its roof, featuring two offset roofs (with a low pitch, stepped or with opposing slopes) that resemble the animal's foot.

In the Tarn region of Occitania, the Gaillacois-style dovecote is distinguished by its square floor plan and a very steep, four-sided pyramidal roof, known as the cow's tail style. Castrais-style dovecotes have a slate, bell-shaped roof resting on a wooden frame with holes for the pigeons to pass through. Finally, the Saint-Suplice or Albigeois style features an almost flat roof with four slopes.



**Figure 5:** Dovehouses on pilotis, France. Source: [www.alaingillodes.fr](http://www.alaingillodes.fr)

In England, the oldest dovecotes have a circular floor plan, very thick walls, a domed roof, and a small entrance door at ground level. They are most common in the central region of rural England, where

feudal control was strongest. Between the 15th and the mid-17th centuries, square and rectangular floor plans were predominant. Dovecotes built between the mid-17th century and the 19th century, on the other hand, have rectangular or octagonal floor plans (Beacham, 1990).

The roof design is determined by the floor plan: square or rectangular dovecotes have a pyramidal roof, while octagonal or circular dovecotes feature a domed or conical roof. In some regions, ingenious square-shaped variations can be found, with four- or six-sloped roofs. The birds entered through a turret on the roof, called a louver, or through openings in the walls (wall louvers) (McCann, 1991, p. 152).

The outer perimeter is encircled, at various heights, by a series of moldings known as rat-courses. Although interpreted as a deterrent against rats, these ledges were actually intended simply as resting places for the birds (McCann, 1991). Moreover, according to English historical sources, rats were not considered a threat to pigeons, at least until the mid-18th century. However, certain measures were adopted with the arrival, toward the end of the century, of a new species—*Rattus norvegicus*—which posed a real threat to dovecotes. It thus became customary to protect the central opening with a board or a tin grate and to position the niches several meters above the ground to shield the nests from possible intrusion by these predators. In some later-period dovecotes, which had thinner walls, it was difficult to carve niches deep into the masonry; therefore, a separate structure of nesting boxes was built using clay bricks, wood, or a combination of wood and stucco. Often, there are ledges (alighting ledges) beneath the rows of nests where pigeons could perch comfortably. In some structures, to increase the interior space for the birds, central pillars with niches or a partition wall—with nests on both sides—were introduced.

In England as well, some dovecotes were equipped with a potence system for cleaning the nests, to which one or two ladders were attached. In Scotland, the earliest doocots date back to the 16th century and are found mainly in the eastern part of the country, in the regions of Fife and East Lothian (IHBC). There are two main types:

- Beehive or tun-bellied: It has a circular plan, with tapered walls culminating in a flat-domed roof featuring a circular opening at the top (Fig. 6) (IHBC). This type is one of the oldest forms in Scotland and is also found in some examples in northern England.
- Lectern type: rectangular in shape, with a single-sloped roof facing south (Fig. 6). Typically, the interior is divided into several separate chambers. In stately settings, they are often decorated with engravings, coats of arms, or commemorative stones. This type became common from the late 16th century onward.

Beginning in the 17th century, when aesthetic considerations took precedence over practical ones, numerous towers were built with circular cross-sections or polygonal floor plans (hexagonal or octagonal). Almost all Scottish dovecotes were built with local stone and the number of nesting boxes ranges from about 500 in the smallest dovecotes to over 2,000 in the largest ones. The potence system, which appeared in England in the late 16th century, was not introduced in Scotland until the following century.



**Figure 6.** Left: A beehive-type dovecote (Source: <https://www.findlatercastle.com/the-doocot/>); Right: a lectern-type dovecote (Source: [https://en.wikipedia.org/wiki/File:Doocot\\_in\\_Caipile\\_-\\_geograph.org.uk\\_-\\_6087120.jpg](https://en.wikipedia.org/wiki/File:Doocot_in_Caipile_-_geograph.org.uk_-_6087120.jpg))

Spanish palomares are simple, functional structures, typically circular in shape, with a few square or rectangular exceptions. Dovecotes with a polygonal floor plan are the rarest, but at the same time also the most striking. Some feature an inner courtyard.

Clay, in its two basic forms—rammed earth and adobe—was the primary building material because it was inexpensive and readily available. The use of stone, a rarer and more expensive material, was reserved for strictly structural purposes, such as for the foundation plinths, at the corners of the building, or in the renovation of openings, shutters and lintels. The use of brick was also rather limited and reserved for finishing overhanging eaves or certain decorative elements.

Nest boxes, carved into the clay, were built starting at a height of about 60 cm above the ground. The roofing solutions, inspired by rural civil architecture, vary: single-sloped or multi-sloped roofs, hipped roofs, or—in the absence of an interior patio—flat or stepped roofs. In all cases, the roof is covered with Arabic tiles.

To shield against the wind, some dovecotes are equipped with masonry windbreaks (*guardiaventos*), where decorative elements are often concentrated. Some tiles are interrupted at regular intervals by red brick pillars, and at these points, ceramic or stone-carved pinnacles are inserted.

Egyptian dovecotes, whose presence has been documented in local history since Ancient Egypt, have entirely unique characteristics (fig. 7). They are large conical towers, built with sun-dried mud bricks, consisting of multiple cylinders stacked on top of one another in four or more levels. Sometimes they have a cylindrical shape, tapering at the top, and are pierced by thin columns arranged in geometric patterns, often in a pyramidal layout (Robotti, 2009, p. 167).

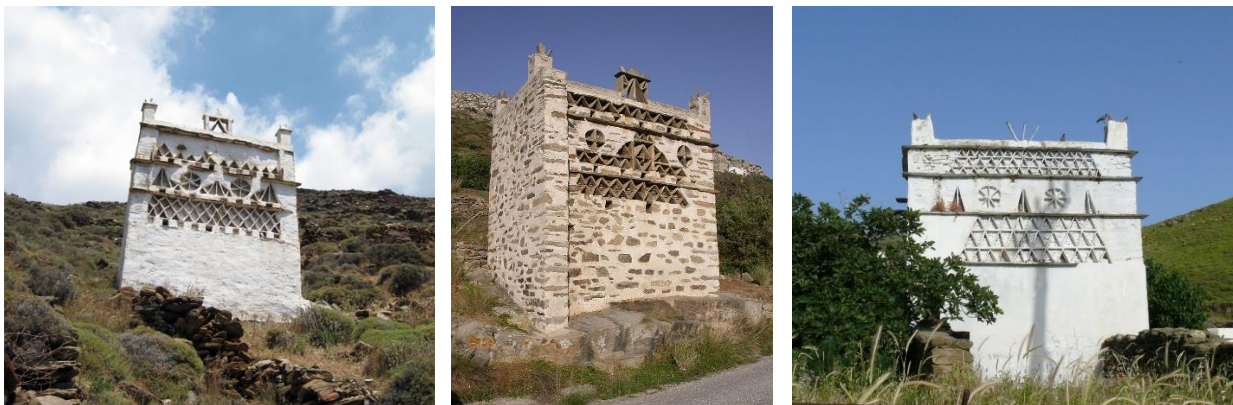
In the Siwa Oasis, on the border with Libya, the presence of salt lakes—fed by underground aquifers—has made it possible to extract small, irregularly shaped blocks of salt mud, which are then cut into smaller bricks and molded using certain types of clay, such as *tafla* or *tiin*. This mixture, known as *kershef*, was the primary material used in the construction of dovecotes in this region and has become a distinctive feature of the area's architectural identity.

Numerous crosswise wooden poles allow the pigeons to perch before taking flight or to seek shelter from predators. The interior is designed with great care, and numerous nesting compartments create an ideal environment for thousands of pigeons to nest.



**Figure 7.** Examples of dovecotes in Egypt. Source: <https://egyptianstreets.com/2022/04/24/dovecotes-a-signature-of-the-egyptian-landscape/>

In the heart of the Aegean, the dovecotes of the Cyclades islands, known as peristeriònes (from the Greek word peristeri, meaning “dove”), feature unique decorative elements (Fig. 8). They are small structures with square, rectangular, or “L”-shaped floor plans, divided into two levels: the upper level (anoi) was intended for the pigeons, while the lower level (katoi) was used for agricultural activities. The building’s orientation was designed with particular attention to the Meltemi, the strong north wind that blows through this area. In fact, the dovecotes are situated on sheltered slopes and, in some cases, feature projecting wall sections to protect the entrances from the wind. The exterior is, without a doubt, the most striking part. The facades display a vast array of decorative motifs, ranging from square, triangular, circular, fishbone, and wheel patterns to more elaborate designs such as cypress-triangle, wheel-triangle, or wheel-cypress patterns. This variety of decorations was achieved using slabs of schist, a local fissile rock. The roof is flat and made of clay. Small turrets are situated at the corners, featuring protruding slate slabs that made it easier for pigeons to land and served as scarecrows for crows (Grano, 2024).



**Figure 8.** Dovehouses in the Cyclades Islands, Greece. Sources: Wikimedia Commons

In southeastern Anatolia, in what is now the province of Diyarbakir, there are a significant number of dovecotes—called boranhane in the local dialect—that have a truly unique appearance (fig. 9). Before chemical fertilizers became widely available, local farmers used pigeon droppings to improve soil fertility and boost watermelon production—the region’s flagship crop.

Various types can be observed: with one, two, three, four, or five compartments (lüle). The walls are built of sun-dried adobe bricks and are about four meters high. The roof has a flat surface formed by thin

branches resting on poplar beams placed against the walls, covered with a layer of clay and fine mud. The birds entered through small openings measuring 25x30 cm located in the walls facing sunlight or water sources (Bekleyen, 2009).

Wooden poles are attached to the interior walls at various heights (145–160 cm and 250–300 cm) to support baskets made of woven willow branches, where the pigeons rest or lay their eggs (Bekleyen, 2009, p. 455). A single-block dovecote contains about 200 baskets, while a three-compartment dovecote holds over 1,500 (Dasdag & Işık, 2011).

Iranian dovecotes (*kabutar khÿneh* or *borj-e kabutar* in Persian) are majestic and fascinating structures (fig. 9). In past centuries, they captured the attention of numerous European travelers, who documented them in their travel journals. Although there are examples dating back to the 10th century, it was between the 16th and 18th centuries that these structures underwent significant development.

During the Safavid period (1501–1736), agriculture remained the cornerstone of the empire's economy. The key to this success was the use of fertilizers, and dovecotes played a decisive role. The geographical and climatic conditions of Isfahan Province proved, in fact, to be ideal for the breeding and rearing of pigeons. The temperate climate, low humidity levels, and abundant availability of farmland and water resources—the Zayandeh River in the Isfahan Plain makes this region the most water-rich in central Iran—created a comfortable environment for these birds.

Ownership of a dovecote was not subject to explicit restrictions, but the high costs of construction and maintenance were affordable only to wealthy individuals, typically Muslims. The only requirement was the mandatory payment of a dung tax (Sarrami, 2024).

The dovecotes of Isfahan are predominantly circular in plan and range in height from 11 to 16 meters. In the Khunsar-Gulpayagan area, northwest of Isfahan, the towers are rectangular in shape, resembling small fortresses. Some have a polygonal plan with 8, 10, or 12 sides and a height of about 10 meters. They are built of mud bricks (adobe) that are plastered and mixed with straw. Each tower consists of an outer drum—lobed, flared, and reinforced internally—supported on the sides by a second, smaller inner drum that extends to half the tower's height.

The niches are evenly distributed along the interior walls; they have a cubic cross-section and vary in size: 20x20x27 cm, 30x25x20 cm, or 20x25x30 cm (El Gemaiey, 2016). The perforated domes at the top provide light to the interior, allow for air circulation, and serve as the only point of entry for pigeons. Their shape resembles that of a pepper shaker, hence the name “pepper pot.” The vaults and domes, with their alternating solid and hollow sections, are often embellished with *muqarnas* decorative elements, typical of Islamic tradition.

The exterior, clad in *pisè*, is often surrounded by a band of smooth plaster (*gach*), colored with lime or red ochre, which was intended to deter reptiles (Sarrami, 2024, p. 109). Some structures were also decorated with poetic inscriptions and pictorial motifs.



**Figure 9.** Left: dovecote near the village of Şükürlü, Turkey, (source: Bekleyen, A., 2009, "The Dovecotes of Diyarbakır: the Surviving Examples of a Fading Tradition," *The Journal of Architecture*, 14(4), p. 457); right: dovecote towers around Isfahan, Iran, (source: Rosati, D., & Saeidi Anaraki, F. (2018). *Borj-e Kabotar: Architecture and Anthropology of the Pigeon Towers in Isfahan Province* <https://borjekabotar.com/>)

### 3.3. Pigeon coops attached to agricultural, residential, or multifunctional buildings

Another type identified does not involve dovecotes as standalone structures, but rather as an integral part of agricultural-residential complexes or multifunctional buildings. Whether located on upper floors, attached to farmhouses, incorporated into monastic complexes, situated at the front of a church, or in a room above the presbytery, each case confirms the extreme versatility of these structures, which are capable of meeting diverse needs and adapting to the functional and architectural characteristics of the complex.

In central Italy, for example, the tower-house-dovecote combines defensive and residential functions, with spaces dedicated to agricultural work, tool storage, and pigeon breeding. It is a building with a quadrangular floor plan, characterized by a predominantly vertical design and organized across multiple stories. Its height allowed for surveillance of the valleys and the signaling of potential threats. The width of the floor plan is almost always constant: 6 or 7 meters per side; this measurement is replicated in the diameter of circular structures. The ground floor served as a tool storage area or was reserved for livestock. The middle floor was used for residential purposes, and the attic was intended for raising birds (Volpe, 1981).

The Marche-style structure is always built of masonry, using locally sourced materials (stone, river pebbles and brick), and rises directly from the ground. The roof comes in several variations: single-pitched (very rare), double-pitched or hipped (Volpe, 1982).

In the Umbrian examples, the architectural elements do not strictly belong to rural construction, but rather draw on the style of military towers and urban residences, creating a unique and functional blend. The craftsmen entrusted with the work are, in fact, the same. The dovecote serves as the dividing element between the residential and livestock areas. It is constructed from simple stone slabs set into the wall or from bricks of various sizes.

"Eyes"—access holes for the pigeons—are cut into the exterior walls. Specific measures were taken to prevent the intrusion of other animals: inverted terracotta pots, with the opening facing downward, or smooth-surfaced iron corner brackets were placed at the corners of the building (Sperandio, 1991).

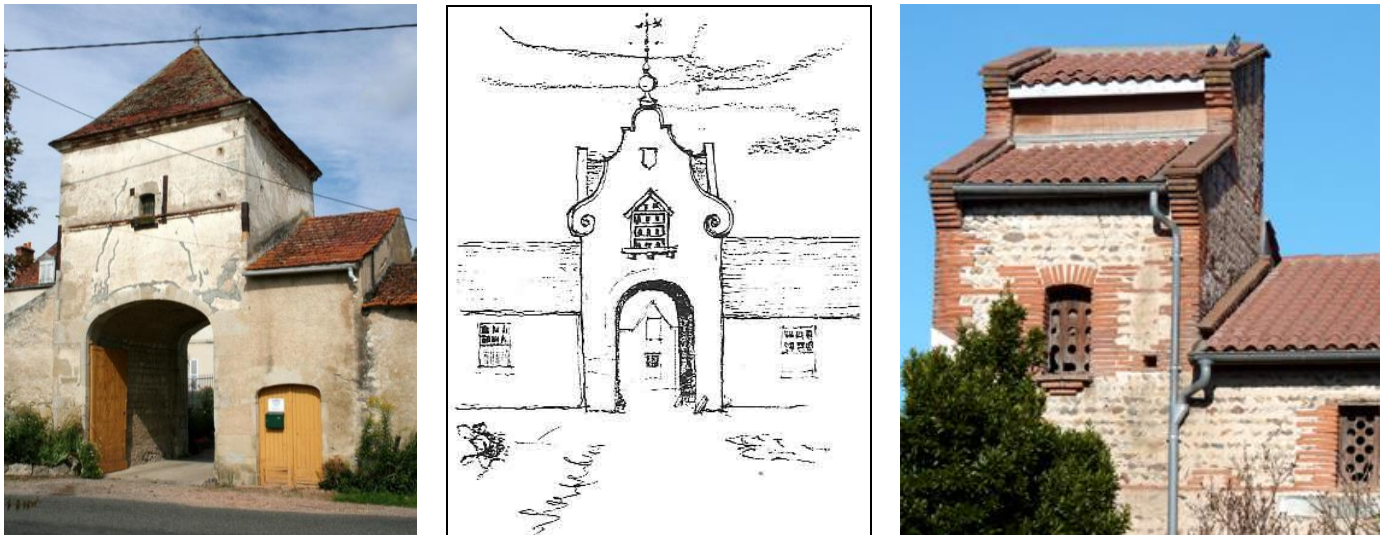
In France, several types of pigeon lofts can be distinguished that are attached to or integrated into a building:

- The portico-style dovecote (pigeonniers porche): quadrangular in shape, built into the entrance portico, within the perimeter wall, of larger farms (fig. 10).
- The balèt dovecote (from the Occitan word balèt, meaning canopy, balcony, or veranda) is a characteristic architectural type of southwestern France, especially in the Quercy region. The term balèt denotes the external timber gallery, supported by wooden posts, which protects the entrance to the dwelling and provides access to the dovecote located on the upper floor.
- Tower-style dovecotes, either single or in pairs, are located on the facade or at the corners of the house (fig. 10). They are small in size and can accommodate only a few dozen nests (Chausserie-Laprée, 1983).

Across the Channel as well, there are dovecotes built into the walls of farm buildings or attached to the main body of the house. Starting in the 18th century, restrictions on keeping pigeons were relaxed, and small enclosures were created inside stables and barns.

A structure designed for multiple functions, in which the upper level was reserved for pigeons, was known as a "pigeon tower." When the pigeon chamber was built on the roof of another building, it was called a "pigeon loft" (McCann, 1991).

In Scotland, beginning in the 19th century, many dovecotes were built to be incorporated into farms or the gables of country houses (fig. 10). Access to the chamber was through hatches located on the floor or walls. In several cases, housing for pigeons was created in parts of a church, such as the bell tower.



**Figure 10.** Portico-style dovecote, on the left, France (source: [pigeonniers-et-colombiers-de-france.webador.fr](http://pigeonniers-et-colombiers-de-france.webador.fr)); center: Edrom, Scottish Borders, a 19th-century dovecote above the entrance arch of a farmhouse, Scotland, source: Institute of Historic Building Conservation (IHBC), *Doocots in Scotland*, [https://web.archive.org/web/20150924033320/http://www.ihbc.org.uk/context\\_archive/57/doocots/scotland.html](https://web.archive.org/web/20150924033320/http://www.ihbc.org.uk/context_archive/57/doocots/scotland.html); right: a tower-style dovecote with a "mule's foot" base at the corner of a house, France (source: [www.alaingillodes.fr](http://www.alaingillodes.fr))

### 3.4. Comparative analysis

The research identified three main architectural types of structures designed for pigeon breeding, from which certain characteristic features and the major differences between the analyzed geographic areas can be identified.

The construction of rock-cut dovecotes was most common in areas where the geomorphological characteristics of the terrain were ideal for excavating artificial cavities, such as Cappadocia, Israel, and certain distinctive regions of Italy (the rural area of Tuscany and southern Italy). These structures have sometimes been misinterpreted, partly due to the hybrid meaning of the Latin term *colombarium*, which refers both to rock-cut dovecotes and to underground collective burial chambers characterized by small niches (similar to those in a dovecote) that contained urns with the ashes of the deceased. Over time, these spaces have also been used as stables, granaries, storage areas, water cisterns, and above all as olive oil mills.

However, the most common architectural type is the tower-style dovecote, which stands separate from the building complex to which it belongs. While in the Euro-Mediterranean context the floor plans adopted are very simple and usually circular or quadrangular in shape (more complex polygonal plans belong to more recent periods), in the Middle Eastern context, on the other hand, there is a tendency toward truncated conical shapes and multi-level designs, with cylindrical volumes that are either stacked or adjacent. The same difference is evident in terms of decoration. In the Mediterranean region, the construction is sober and very simple (only the date of construction or the owners' coats of arms are visible on the exterior walls), unlike Egyptian and Iranian dovecotes, which are characterized by a rich repertoire of decorative solutions featuring geometric motifs. The distinctive dovecotes of the Cyclades islands, among the most elaborately decorated, are an exception to this rule.

In all the regions under consideration, the materials used are locally sourced, readily available and affordable. A defining feature is the presence of a projecting cornice made of brick or stone, positioned at various heights. Whether single or multiple, with a rectangular, toric, or complex, curvilinear cross-section, it encircles the tower along its entire circumference or is interrupted at several points. In addition to protecting the facade from rain, it served as a deterrent to animals attempting to climb the walls to reach the interior.

Roofing systems vary widely and are largely determined by the basic floor plan. Circular dovecotes are, in most cases, topped by a dome. Dovecotes with a quadrangular base, on the other hand, feature a flat roof, a stepped roof, a single- or double-pitched roof, or a roof with a variable number of slopes. The open-air dovecotes of Salento are a unique and exceptional case.

The interior was designed specifically to provide a comfortable environment for the birds. In most cases, the walls were left unfinished, and niches were carved out of the wall thickness, making use of the empty space created by the staggered arrangement of the masonry units.

The potence system for the periodic cleaning of nests is common in the Anglo-French region, but has not been found in other regions, where wooden ladders, resting directly against the walls, were likely used instead.

The final category examined includes dovecotes that are not architecturally independent structures but are integrated into manor houses, rural complexes, churches, or castles. The variety of examples in this category attests to the importance attributed to pigeon breeding, to the point of incorporating these structures into pre-existing agricultural, residential, or multifunctional complexes.

For greater clarity, Tables 1 and 2 provide a summary of the main characteristics of each type.

**Table 1.** Rock-cut dovecotes. Source: Authors'elaboration

| Territory | Location                                            | Geomorphological context                                                            | Dating                                                                              | Niches                                                                                               | Characteristic features                                                                        |
|-----------|-----------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Italy     | Northern Lazio (Tuscia): Apulia, Basilicata, Sicily | Rooms carved out of very crumbly tuff                                               | Varies by region                                                                    | Typically quadrangular in shape, arranged on multiple levels                                         | Spaces often connected by passageways                                                          |
| Turkey    | Cappadocia, Central Turkey                          | Cavities formed in the characteristic tabular rock outcrops and soft tuff pinnacles | Byzantine origin, with subsequent alterations during the Seljuk and Ottoman periods | Round-arched, raised-arched, lunette-shaped, quadrangular, flat, or half-barrel vaulted              | Symbolic decorations made with natural pigments at the entrance to some dovecotes              |
| Israel    | A prime example at the Beit-Gruvin-Maresha site     | Underground dovecotes carved into the rock                                          | 3rd–2nd centuries B.C.                                                              | Thousands of regular niches on the walls, typically rectangular, trapezoidal, or triangular in shape | Subsequent repurposing of these spaces as stables, barns, warehouses and underground oil mills |

**Table 2.** Isolated dovecote towers and dovecotes attached to other buildings. Source: Authors'elaboration

| Region              | Type                                                            | Floor Plan                                                                                                       | Material                                                        | Coverage                                                                                             | Roofing Material                                                                   | Openings for pigeons                                                          | Nests                                                             | Decorations                                                                              | Distinctive Features                                                                          |
|---------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Salento             | Isolated Dovecote Tower                                         | Circular (most common); quadrangular, octagonal or supported by arches (more recent)                             | Tuff, Lecce stone                                               | Absent                                                                                               | -                                                                                  | Access from above is made possible by the absence of roofing                  | Created in the masonry by the staggered arrangement of the blocks | No decorations or polychromatic effects                                                  | Outer intermediate frame, decorated cornices, base plinth                                     |
| France              | Isolated Dovecote Tower; dovehouses attached to other buildings | Circular (most common), quadrangular, polygonal, on pilots or arches, portico-style, turret-style or bâlet-style | Stone (rough or cut), wood, earth, clay                         | Conical roof; single- or double-pitched; with 1, 2, 4, 6, or 8 slopes; domed; stepped; "mule's foot" | Slate, straw, flat or interlocking roof tiles, granite, wood                       | Perforated flight grids (made of wood, plaster, brick or stone)               | Hollows in the masonry; nesting boxes; wicker baskets; roupines   | Limited and varying by region                                                            | Rondière, decorated cornices, pinnacles, lanterns, potence                                    |
| England             | Isolated Dovecote Tower; dovehouses attached to other buildings | Circular (75% of cases), quadrangular, octagonal                                                                 | Local stone and bricks                                          | Dome-shaped; with a conical roof; pyramidal; with 4 or 6 slopes                                      | Slate, stone, straw, wood                                                          | Louver or wall louver                                                         | Recessed into the masonry; nest boxes                             | Generally understated appearance                                                         | Rat-courses, potence, aligning-ledges, central pillars with internal cavities, partition wall |
| Scotland            | Isolated Dovecote Tower; dovehouses attached to other buildings | Beehive-type, lectern type-circular, polygonal                                                                   | Local stone                                                     | Flat dome; single-sloped roof                                                                        | Slate, Local stone                                                                 | An opening in the roof; beneath the sloped roof or side openings in the walls | Dig into the masonry; wooden nest boxes                           | In stately estates, often decorated with engravings, coats of arms, or decorative stones | Rat-courses, potence, interior walls that are unfinished or finished with paint or plaster    |
| Spain               | Isolated Dovecote Tower                                         | Circular, square, rectangular, polygonal; with or without an interior patio                                      | Compacted earth and adobe. Stone and brick for certain elements | Single- or multi-sloped; hipped; flat or stepped roof                                                | Arabic roof tiles, flat roof tiles                                                 | Made in the roof planes (slits below the gutter)                              | Dug into fresh clay; adobe brick nest boxes                       | Extremely simple and unadorned. Few examples feature elaborate decorations.              | Masonry windbreaks (tapial or adobe)                                                          |
| Egypt               | Isolated Dovecote Tower                                         | Conical towers consisting of several stacked cylinders; cylindrical in shape, tapering at the top                | Mud bricks; kershef                                             | Conical summit                                                                                       | Mud bricks; kershef                                                                | Openings in exterior walls                                                    | Dig into the masonry                                              | Geometric decorations                                                                    | Thin, cylindrical, transverse logs arranged in geometric patterns                             |
| Greece (Cyclades)   | Isolated Dovecote Tower                                         | With a square, rectangular, or "L"-shaped floor plan, consisting of 1 or 2 stories                               | Local slate, slate slabs for decorative purposes                | Flat roof                                                                                            | Clay                                                                               | Small holes in the facades sheltered from the wind                            | Openings in the masonry                                           | A wide variety of geometric designs                                                      | Small towers placed at the corners to help birds land                                         |
| Diyarbakir (Turkey) | Isolated Dovecote Tower                                         | With one, two, three, four, or five compartments (lûle)                                                          | Sun-dried adobe bricks                                          | Flat roof                                                                                            | Thin branches, resting on poplar beams, covered with a layer of clay and mud up to | Openings in walls facing the sun                                              | Baskets made from willow branches and hung from wooden poles      | Limited or absent                                                                        | Internal support pillars to provide greater stability to the structure                        |
| Iran                | Isolated Dovecote Tower                                         | Circular, square or polygonal                                                                                    | Mud bricks (adobe), often mixed with straw                      | Dome-shaped                                                                                          | Mud bricks (adobe)                                                                 | Openwork domes on top                                                         | Openings in the masonry                                           | Decorative paint on exterior walls                                                       | Central band of smooth plaster (gach), muqarnas elements in the domes                         |

#### 4. What does the future hold for dovecotes? Contemporary projects

Recognizing these structures—long considered obsolete and belonging to an architectural culture deemed “minor”—as among the most distinctive expressions of rural architectural heritage requires careful reflection on the challenges associated with preserving these assets and on the strategies for their enhancement. To date, many dovecotes—particularly those belonging to major rural complexes or public parks—have undergone significant restoration work and been converted for new uses: lodging facilities, luxury residences, agritourism properties, or public spaces for meetings and cultural activities.

A substantial number of “minor” dovecotes, scattered throughout the most remote countryside, have, however, been excluded from restoration efforts and left to deteriorate inexorably over time. Many have collapsed and others remain in a state of neglect and disrepair.

In this sense, surveys, censuses and mapping efforts using new technologies have proven to be essential resources for bringing attention and visibility back to even the most marginal structures, saving them from oblivion. The protection of this heritage goes beyond mere—albeit complex—physical conservation; it is of strategic importance for reflecting on current human practices. Far more than mere reminders of the past, dovecotes are, in fact, living entities that continue to exert an enchanting charm. As silent guardians of the centuries-old intertwining of architecture, landscape, and agricultural traditions, they prove to be valuable tools for rethinking our present in terms of sustainability and the balance between humanity and nature. The inexhaustible vitality of these structures is confirmed by a series of contemporary projects inspired by traditional dovecotes or the figure of the dove.

A prime example is the Nativity Façade of the Sagrada Família, brought to life by doves carved in stone and perfectly integrated into the architectural composition. Gaudí weaves into the stone the intricate narrative of the harmony of life and nature as a divine creation, in which the doves symbolize peace and spiritual elevation.

From a decorative and symbolic element, this bird becomes, in itself, a natural element that can be integrated into architecture. In *The City of Tomorrow and Its Planning*, Le Corbusier describes the scene of St. Mark's Square teeming with pigeons (Le Corbusier, 1929).

"The uniformity of the countless windows on this vast wall facing St. Mark's Square creates the same visual effect as the smooth surface of a room. The repetition of the same unit lends the wall a boundless yet readily appreciable grandeur; the result is a clear and simple archetype. The pigeons of St. Mark's add their own uniform pattern, providing a varied and effective touch to the composition." (Le Corbusier, 1929, p. 69)

In contrast, Salvador Dalí's unusual dovecote at his eccentric residence in Port Lligat, in the province of Girona—a labyrinthine structure furnished with extravagant furniture and objects (fig. 11)—takes on a symbolic dimension, bordering on the dreamlike. In the outer courtyard, a huge stone egg sits atop a white dovecote whose wall openings, on days when the tramontana wind blows, produce a sound resembling a howl. The Spanish artist's home-studio is considered, to all intents and purposes, a true biological structure, a living architecture in harmonious relationship with the picturesque landscape of the Catalan coast.



**Figure 11.** Pigeon coop at Dalí's cottage in Port Lligat, left, (source: Soul Studio, “Casa Dalí – Coco Capitán”); Capsule, a project by Matali Crasset, Caudry, France, 2003 (center) (source: <https://www.matalicrasset.com/en/project/capsule-caudry>); Dovecote Studio – Haworth Tompkins, right (source: Cilento, K. ,2010, Dovecote Studio / Haworth Tompkins. ArchDaily. <https://www.archdaily.com/89980/dovecote-studio-haworth-tompkins>)

O Pombal, the monument erected in 1960 by architect Oscar Niemeyer in the Brazilian capital, also has profound symbolic significance. The monument, shaped like an obelisk, features several openings designed for pigeons to perch on. The name of the work is a play on words that refers both to the Portuguese term “os pombos” (pigeons) and to Minister Marquis of Pombal, a historical figure associated with colonial reforms in Brazil. The dovecote, in this case, serves no productive purpose. The pigeons symbolize a people free from labor: they are not exploited for their eggs or meat, but gather for the sole pleasure of flight (Gissen, 2009).

The Lampione Ravello project by Italian architect and designer Filippo Alison—commissioned in the early 2000s by the town of Ravello, in the province of Salerno—is part of an approach aimed at fostering a harmonious coexistence between the urban landscape and these birds, which are now largely regarded as pests in city squares. The streetlights were conceived as delicate structures with plump bronze pigeons perched on their arms, in the act of taking flight (De Iuliis, 2021). From a simple and functional element of urban furniture, the streetlight becomes an urban sculpture, engaging in a dialogue with the surrounding landscape, populated by flocks of real pigeons.

Alongside these interpretations, however, some projects revive the dovecote's original function—that of raising pigeons. Capsule, by designer Matali Crasset, is, for example, a prototype of a contemporary dovecote designed to pass on the centuries-old practice of pigeon-keeping to new generations (fig. 11). The work, inaugurated in 2003 in Caudry, in northern France, was commissioned by the Beauvios Pigeon Fanciers' Association. The structure, painted a bright yellow, resembles a capsule, modeled after the dovecotes of ancient Egypt. The interior evokes the shape of a tree—a natural resting place for these birds—and is designed to collect guano, which local farmers use as fertilizer (Crasset, 2003).



**Figure 12.** Pigeon Tower on Dam Square—Arne Hendrik's imagined pigeon tower standing on Dam Square, rendering by Dominik Einfalt and Andy Cartier (left), source:

<https://www.mediamatic.net/en/page/379633/mycelium-pigeon-towers>; Pigeon Tower, Venice Architecture Biennale, Italy, 2021 (center), source: <https://www.studio-ossidiana.com/pigeon-tower-la-biennale-di-venezia>; Mourning Dovecote by Schwartz and Architecture, Sonoma, California, United States (right), source: <https://www.archdaily.com/1026709/a-mourning-dovecote-schwartz-and-architecture>

One example of a conversion is The Dovecote Studio, a project by the London-based firm Haworth Tompkins (fig. 11). Set within the ruins of a Victorian dovecote and clad in Corten steel, the new studio—built on site—was designed as a space for contemporary performances and exhibitions. Out of respect for the existing building, the intervention was limited to the bare minimum, and even the vegetation growing on the dovecote was preserved. (Cilento, 2010).

The experiments by artist Arne Hendricks, which use mycelium as a building material for modern pigeon towers, represent a more innovative approach. Beginning in the summer of 2020, blocks of live mycelium—derived from oyster mushroom cultivation waste—were used to create spaces where Amsterdam's pigeons have found shelter to nest (Fig. 12). These towers are not meant to last forever but are merely part of the mycelium's life cycle. After about a year, the organic material decomposes,

leaving behind only fertile soil enriched by the guano deposited by the pigeons, which is then distributed to local farms and urban gardens, where the cycle begins anew. These structures are, by their very nature, living architectures and represent only one phase of this life cycle. As the mushrooms sprout, mature, and decompose, the towers shrink, bending under their own weight until they collapse. At the same time, the Mycelium Pigeon Towers bear witness to the relentless search for new forms of coexistence with these birds in urban environments (Mediamatic, 2020).

In the same vein, Studio Ossidiana's Pigeon Tower, presented at the 2021 Venice Biennale, explores the relationship between humans and birds as it addresses the exhibition's central theme "How will we live together?" (fig. 12). In the Giardino delle Vergini, the dovecote tower with its metallic feathers becomes an urban refuge for pigeons and other bird species, offering them shelter from the elements and predators. The structure's form is inspired by the bell towers that rise above the lagoon city (Studio Ossidiana, 2021).

Among the most recent projects inspired by traditional rural dovecotes is the Mourning Dovecote by Schwartz and Architecture (fig. 12). Nestled in nature, the home of the owner-architect in Sonoma, California, incorporates twelve artificial nests into its exterior facade, modeled after the typical niches found on farms or in barns. Particular attention was paid to the orientation, proportions, and ventilation best suited to encourage nesting by mourning doves. This species, widespread in North America and belonging to the Columbidae family, owes its name to its characteristic call, which resembles a funeral dirge. A window on the lower level allows visitors to observe the birds as they feed and to hear their sweet call. The roof, constructed of sheet metal, takes on a distinctive "feather-like" shape. The project, built entirely with sustainable materials, aims to promote coexistence between humans and the natural environment, fostering a respectful and balanced relationship (ArchDaily, 2025).

## 5. Conclusion

The research has shown that architectural analysis alone is not sufficient to fully understand the value of a dovecote. The study of the architectural typologies presented confirms both the close connection between dovecotes and the local territory and the decisive impact - on design choices - of climatic, environmental, and agricultural factors.

For these reasons, the approach to the research was oriented toward a comparative method involving multiple cross-cutting factors:

- The combined analysis of architectural treatises and agronomic literature;
- The parallel analysis of the various design choices made across multiple geographical contexts examined:
  - Euro-Mediterranean context: Central and Southern Italy; Israel; Turkey; Greece; Spain; England and Scotland; France; Egypt;
  - Middle Eastern context: Iran.

The literature has shown that it is not possible to identify a single, well-defined model of a dovecote that can be attributed to a specific historical period. Every era, from the Roman period onward, has been familiar with and experimented with the main construction models.

With the exception of structures in the Middle East - which exhibit specific construction characteristics related to both the materials and the architectural forms used - a survey of the main design solutions adopted in the Mediterranean context has made it possible to identify a common architectural language (albeit with minor local variations and the use of different materials depending on the area), in which the tower-style dovecote - conceived as an architecturally autonomous building - is the most widespread type of structure.

The digression on the contemporary reception of this phenomenon - included at the end of this article - aims precisely to highlight how current and spontaneous the recognition of these structures is as among the most emblematic and identity-defining expressions of vernacular architecture, capable of suggesting new ways of conceiving architecture based on a renewed relationship between humans and nature.

Following this initial phase of systematic study of the territory, future research prospects call for continuing along this path of comparison to further clarify the link between design choices, architectural form and aspects that lie outside architecture but are firmly intertwined with it (climate, agricultural economy, biodiversity, local traditions)—both to provide a comprehensive picture of these complex structures, precious gems of rural architectural heritage, and to conceive and design strategies aimed at their effective adaptive reuse and contextual enhancement within the broader framework of the cultural landscape.

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### **Ethics statements**

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The author declares no conflict of interest.

### **Contribution to the Field Statement**

This manuscript examines the phenomenon of dovecotes—typically rural agricultural structures used for raising pigeons—in the Euro-Mediterranean and Middle Eastern contexts. The research is conceived as a wide-ranging study that, starting from an analysis of historical sources and scholarly treatises in the field, aims to understand the phenomenon in its entirety and, to that purpose, proposes a classification of the main architectural types identified. The discussion of the contemporary reception of this heritage highlights the current and spontaneous recognition of these structures as among the most emblematic and identity-defining expressions of vernacular architecture—capable of suggesting new ways of conceiving architecture based on a renewed relationship between humans and nature—and, at the same time, underscores the need for the protection, conservation, and enhancement of this important heritage.

### **Authors' Contributions**

Paragraphs 2 and 3 are by Francesco Del Sole; paragraphs 1 and 4 are by Lorenzo Paiano. Paragraph 5 is by both authors.

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