Birds nesting in human remains: An unexplored phenomenon

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Abstract. Ossuaries, designed for human bone preservation, become unexpected habitats for birds like swallows and pigeons, offering a unique opportunity to study the taphonomic signs of this interaction. Birds choose ossuaries for nesting due to the stable substrate of human remains, particularly the durable and protective nature of skulls. This symbiosis highlights the adaptability of animals to unconventional environments. Narratives from 19th- and 20th-century English literature chronicle instances of birds nesting in human skulls, captivating ornithologists, and curiosity enthusiasts. Moreover, modern cemeteries, exemplified in England and France's Breton region, serve as additional settings for bird nesting, highlighting the diverse choices of shelter made by birds. A comprehensive analysis of these occurrences holds the potential to yield valuable insights into taphonomy, bone preservation, and the ecological dynamics of anthropized environments. This article serves as a succinct reference, encouraging further investigation into the unique interaction between life and death.

Key words: Ossuary habitats, taphonomy, nest in the skull, human-animal spaces

Ossuaries, designated for the preservation of human bones, can become surprising settings for biological activity, especially when birds such as swallows and pigeons decide to make their remains home. This unusual phenomenon presents a unique opportunity for scholars to explore the taphonomic signs left by this interaction between wildlife and human death.

The choice of birds to establish their nests in ossuaries may seem surprising, but it is motivated by the unique substrate provided by human remains. Skulls, being hard and durable structures, offer a stable and robust shelter for nest construction. Additionally, the natural shape of the skull provides spaces and corners that birds can exploit to protect their nests from predators and the elements. This symbiosis between human history, symbolized by the remains in which birds choose to nest, and contemporary wildlife highlights the extraordinary ability of animals to adapt and find refuge in unusual environments.

Narratives about birds building their nests inside human skulls are surprisingly prevalent in English literature from the 19th and early 20th centuries, captivating the attention of both Victorian ornithologists and enthusiasts of curiosity from that era. Numerous cases are documented in books and popular magazines from that period. For instance, there are accounts of sparrows selecting a skull left to dry outdoors by an anatomy student (Blanchan et al., 1907). In another episode, a skull was discovered during construction work at Hockwold Hall, Norfolk. After its discovery, a resident mounted Hockwold's skull on a garden shed wall and was astonished to see a sparrow flying in and out of the skull, laying four or five eggs inside. 1870s (Chilvers, 1877).

In Norfolk, at the dawn of the 20th century, birds were found nesting among the skeletal remains of a criminal displayed publicly. After the execution, the body was left to decompose in a cage hung outside the village of Wereham, serving as a gruesome warning to anyone who dared to threaten the local community. Approximately five years later, around 1810, a child climbed the scaffold and discovered several blue tits inhabiting the interior of the skull (Stevenson, 1876).

Plentiful other accounts are scattered across the pages of both ancient and contemporary books, continuing to highlight the curious phenomenon of birds choosing human skulls as nesting sites. During excavations conducted in a Saxon cemetery in Saffron Walden around 1870, a Redstart decided to establish its nest in the skull of an exposed skeleton, successfully hatching and raising a brood of four chicks (Travis, 1876). In more recent times, during an expedition to Cape Clear Island in Ireland, ornithologist Ronald Lockley made an extraordinary discovery inside a ruined chapel: a robin's nest within a skull, fallen from an old stone tomb embedded in the walls (Lockley, 1983).

Not only human skulls have been the subject of this unique nesting habit by birds.

The Chinese Hoopoe, dubbed the "coffin bird", earns its nickname due to its singular habit of nesting at times in cavities carved into sarcophagi or amid the refined carvings with which they are adorned. This unusual behavior is made possible precisely in China, where sarcophagi are placed outdoors under mounds rising from the ground, creating a conducive environment for this nesting form (Cenzi, 2020).

Moreover, according to the account by the writer Dixton, it appears that the snow bunting, a species residing in the Arctic, has developed the unusual habit of seeking refuge in the thoracic cavities of those unfortunate enough to perish in the vastness of the tundra (Dixon, 1902). This unique interaction once again underscores the extraordinary adaptability of creatures to their environment.

While the recesses and crevices in modern cemeteries are often utilized as useful refuges for various birds (Smith & Minor, 2019), it is crucial to emphasize that these nesting sites are not driven by any mechanism specifically linked to death. On the contrary, they reveal the astonishing versatility of birds in seeking shelter and establishing nests wherever the opportunity arises. This adaptive capacity underscores the constant dynamic balance between animal life and the surrounding environment, suggesting that nature consistently finds creative ways to coexist with the realms of both the living and the deceased.

Birds, with their extraordinary adaptability, can choose unexpected and mundane locations for nesting. It is not uncommon to find them establishing nests in flowerpots or old boots (Healy, 2022). However, their versatility extends further, as Armstrong noted in 1955; birds can even nest in the dried carcasses of animals and, even more surprisingly, inside the remains of other birds (Armstrong, 1955).

In this context, it should not be surprising that if human skulls were left exposed to the elements, they might occasionally provide a refuge, like any other suitable object. Given that cemeteries and ossuaries have historically and culturally amassed a significant quantity of human remains it is not unusual for these places to inadvertently offer a habitat for nesting birds from time to time.

In England, at the church of St. Leonard in Hythe, Kent, there is an ossuary housing hundreds of skulls. Among the peculiarities of this place, a particularly notable skull stands out: inside it, there is a bird's nest. The birds gained access to the building, in the 1940s, when bomb explosions damaged the glass windows. During that period, they constructed a nest within the cavity of one of the damaged skulls (Caroline, 2015).

Similarly, in England, within the crypt of Holy Trinity Church in Rothwell, Northamptonshire, newspapers in 1912 reported the discovery of a nest in a skull. It was believed that a bird had infiltrated the crypt through a hole in a ventilator (Northampton Mercury, 12.7.12).

Additional examples emerge in the Breton region of northwestern France. The ossuary at Église Saint-Grégoire in Lanrivain, dating back to the 15th century, still preserves some traces of its original function, containing human remains along with a notable example of a nest located inside a skull. It is interesting to note that, despite many ossuaries undergoing the removal of their relics in the 19th and 20th centuries, this is one of the last ossuaries in the region that retains part of its historical integrity (Cenzi, 2020).

A different case is that of the ossuary at Église Saint-Fiacre in Breton cemeteries before World War I. In the ossuary, or charnel house (located in the cemetery or annexed to the church), following the exhumation of a tomb, the skull was separated from the other bones and placed in a wooden box shaped like a house with a pointed roof; this box was decorated by traveling craftsmen or cemetery workers, with the name of the deceased and birth and death dates.

The skull, contained within the box, remained partially visible through a heart-shaped opening. Finally, the box was positioned in the church or in a niche of the ossuary, serving as a kind of miniature tomb. In the ossuary, eight skull boxes are still lined up, bearing witness to the ancient practice. In the last box, a bird's nest hides the skull (Coughlin, 2016).

The documentation of cases is abundant in English travel literature; however, in the context of archaeological and anthropological scientific literature, the treatment of this phenomenon is remarkably limited. The relationship between human activity and bird remains found in archaeological contexts has been extensively studied (Ericson, 1987). Nevertheless, the lack of specific investigations into the taphonomic evidence associated with bird nesting in humans remains a gap to be filled.

On the contrary, considerable attention has been devoted to the issue of taphonomic evidence related to scavenging birds in forensic contexts. In forensic cases involving exposed human cadavers, birds and other vertebrate animals often pose a significant challenge in terms of recovery, identification, and interpretation of the circumstances of death. For instance, they may remove body parts, damage skeletal features, and create "pseudo-injuries," complicating trauma analysis (Indra et al., 2022).

In Europe, over five hundred bird species find their nesting grounds, exhibiting a wide range of behaviors. Prominent among these species are vultures (Accipitridae), corvids (Corvidae) such as crows and ravens (Corvus sp.), magpies (Pica sp.), various raptors including eagles, buzzards, and hawks (Accipitridae), and seabirds like gulls (Laridae), all adept scavengers. However, many avian species, such as the red kite (Milvus milvus), pigeons (Columbiformes), pheasants (Phasianidae), and various waterfowl like ducks (Anytime), are known to occasionally intervene in forensic scenes, albeit infrequently mentioned in specialized literature (Indra et al., 2022).

Various taphonomic studies highlight the consistent presence of birds as scavengers, sometimes even among the first to arrive at a carcass. The timing of birds' arrival at a carcass depends on the species and the stage of decomposition (Read & Wilson, 2004). Bones may be dispersed in the air during take-off and landing (Komar & Beattie, 1998), and many bird species are more attracted to the insects colonizing the body than the body itself (Young et al., 2014).

In their attempts to feed, birds often prefer soft tissues to bones, attempting to access bone marrow or leaving marks such as holes, punctures, and scratches on bones, resulting from using beaks and talons as tools to remove soft tissues (Reeves, 2009). Characteristic marks left by beaks or talons are unpaired, roughly parallel, or paired in V or L shapes (Sołtysiak, 2013). Additionally, bird scavenging can cause conical or V-shaped holes, as well as notches along the edges of flat or broken bones (Gifford-Gonzalez, 2018). Bones digested by birds frequently show acid etchings, causing dissolution and deterioration of the bone surface (Gifford-Gonzalez, 2018).

Regarding taphonomic signs resulting from nesting in bones, there remains a significant knowledge gap. However, a thorough macroscopic analysis of signs left by birds in ossuaries could reveal details of great interest. Bones, subjected to the corrosive action of acids in bird feces, might manifest clear signs of erosion. These could include the presence of holes created during the nesting process, accompanied by traces of organic residues.

The importance of analyzing taphonomic signs goes well beyond the mere act of nesting in ossuaries. The speed at which fecal acids interact with human bones could have profound implications for the overall understanding of taphonomy. A thorough understanding of these processes could also reveal crucial insights into the mechanisms that preserve or deteriorate bones in similar contexts.

In the current context, where cemeteries have attracted increased attention as green spaces capable of hosting natural habitats in urban areas, the study of ossuaries as ecosystems remains a relatively unexplored but promising research area (Quinton & Duinker, 2019). Investigating bird nesting in ossuaries could provide valuable insights into ecological dynamics in anthropized environments, highlighting birds' ability to adapt to unusual settings.

Moreover, the taphonomic analysis of these interactions can provide crucial insights into the processes of human bone preservation in various environmental settings. Despite most cases being discovered

accidentally, this list, inevitably incomplete, aims to serve as a unified reference to spark curiosity. It is hoped that new examples of this unusual phenomenon may emerge, contributing to a more comprehensive understanding of this extraordinary interaction between life and death.

References

Armstrong, E. A. (1955). The wren. London, Collins. http://archive.org/details/wren00arms

Blanchan, N. (1907). Birds every child should know. New York : Grosset & Dunlap. http://archive.org/details/birdseverychilds00blan

Caroline, S. (2015). https://flickeringlamps.com/

Chilvers, F. T. (1877). Bird's nest in a Human skull. In The Garden: Vol. XII (p. 133). Ex libris.

Cenzi I. (2020). https://www.bizzarrobazar.com/

Coughlin, M. (2016). Skull boxes. Conversations: An Online Journal of the Center for the Study of Material and Visual Cultures of Religion. doi:10.22332/con.obj.2014.24

Dixon, C. (1902). Birds' nests; an introduction to the science of caliology. London, G. Richards; New York, F. A. Stokes company. http://archive.org/details/cu31924000206114

Ericson, P. G. P. (1987). Interpretations of archaeological bird remains: A taphonomic approach. Journal of Archaeological Science, 14(1), 65-75. doi:10.1016/S0305-4403(87)80006-7

Gifford-Gonzalez, D. (2018). An introduction to zooarchaeology. Cham: Springer.

Healy, S. D. (2022). Nests and nest building in birds. Current Biology, 32(20), R1121-R1126. doi:10.1016/j.cub.2022.06.078

Indra, L., Errickson, D., Young, A., & Lösch, S. (2022). Uncovering Forensic Taphonomic Agents: Animal Scavenging in the European Context. Biology, 11(4), 601. doi:10.3390/biology11040601

Northampton Mercury 12.7.12 https://www.britishnewspaperarchive.co.uk/

Quinton, J. M., & Duinker, P. N. (2019). Beyond burial: Researching and managing cemeteries as urban green spaces, with examples from Canada. Environmental Reviews, 27(2), 252-262. doi:10.1139/er-2018-0060

Read, J. L., & Wilson, D. (2004). Scavengers and detritivores of kangaroo harvest offcuts in arid Australia. Wildlife Research, 31(1), 51-56.

Smith, A. D., & Minor, E. (2019). Chicago's Urban Cemeteries as Habitat for Cavity-Nesting Birds. Sustainability, 11(12), Article 12. doi:10.3390/su11123258

Stevenson, H. (1876). Ornithological notes from Norfolks. In Zoologist (pp. 5105-5108). University of California.

Travis, H, (1876). Redstarts and Blue Tits nesting in Human Skull. In Zoologist (p. 5042). University of California.

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