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Where Memory Takes Root: Ecology and the Material Conditions of Holocaust History at the Sydney Jewish Museum

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Abstract

This article advances an ecological approach to Holocaust museology, arguing that environmental processes condition how evidence forms and becomes knowable prior to historical interpretation. Ecology, as the term operates here, refers to an epistemological framework that attends to the relational and material conditioning through which traces of violence acquire legibility across successive environments. Drawing on the Sydney Jewish Museum as its primary case study, the article traces a specific strand of this inquiry through forensic artifacts recovered from Ukrainian mass graves by the Australian War Crimes Commission whose condition reflects decades of humidity, sedimentation, and biological decay. The article argues that at the Sydney Jewish Museum, curatorial conservation and educational practice already function as ecological practices in this precise sense, maintaining the material conditions of historical understanding through deliberate mediation and institutional interdependence. By extending the insights of environmental history, this reframing offers Holocaust museology a methodological vocabulary for analysing the relationship between environmental conditioning and the formation of historical knowledge in the museum setting.

Key words

Environmental history; Holocaust studies; Museum studies; Memory studies; Material culture; Forensic evidence; Ecology of violence; Sydney Jewish Museum

Introduction

They could feel the heat even under the canopy of pines outside Serniki.[1] It was the summer of 1990, and the Australian team worked in air thick with dust and mosquitoes, their clothes damp as they traced trenches through sandy soil. At the edge of the clearing, Professor Richard Wright crouched over a shallow trench, reading the earth for signs of disturbance. Ancient bands of orange iron ran in clean lines, but here the striations blurred into a sandy smear. This was not natural weathering. Soil composition allowed forensic inference: something had shifted the earth. He signaled to press on. Shovels and backhoes moved in, and on 27 June 1990, the first bodies surfaced two meters down: skeletons in boots, hair still plaited, the bloom of a tiny blue button caught in the sand.[2]

The grave stretched forty meters, a deliberate rectangle sloping at careful angles. A ramp wide enough to drive people down into the pit had been cut into the eastern wall, just as the witness had claimed.[3] As the pit widened, the design of the grave revealed itself. In one section the victims lay in ordered rows, shot methodically in the back of the head. At the southern end of the grave, skeletons twisted together in disorder, with some skulls crushed by rifle butts.[4] The dead testified to the rhythm of the killing as beginning with grim precision and ending in a hurried slaughter. The artificial leg of a man remembered locally as Yankel Kaz surfaced where it had been discarded.[5] What memory alone had preserved, the soil confirmed.

Forty-eight years earlier, in the autumn of 1942, the Jews of Serniki were marched from the ghetto to this forest clearing.[6] The ground was soft, not yet frozen, easy to dig and easier to fill. Mothers clutching children, the elderly and infirm were herded down the ramp to lie prone, where they were shot or beaten before the earth closed over them. More than five hundred people were killed in a single day.[7] For decades, the forest kept silent until the exhumation in the heat of summer gave material form to what memory alone had carried—an atrocity written into soil and bone.

1. I would like to thank the education and curatorial teams at the Sydney Jewish Museum for their generous support of this research. I owe special thanks to Dr Jonathan Kaplan for supervising my fellowship and for his incisive guidance throughout this project; to Emeritus Professor Konrad Kwiet for granting me access to his personal archive on the forests and the Final Solution and for sharing his invaluable expertise on the Australian war crimes investigations; to Professor Avril Alba, whose research on Holocaust museology and the Sydney Jewish Museum deeply inspired this article; and to Roslyn Sugarman and the curatorial team for facilitating access to collection materials during the museum's renovation. I am equally grateful to Sandy Hollis and the education department for their insight into the museum's pedagogical work, and to Greta Goldberg and her family for sponsoring my 2024 fellowship at the Sydney Jewish Museum.

2. David Bevan, *A Case to Answer: The Story of Australia's First European War Crimes Prosecution* (Melbourne: Macmillan, 1994), 81; see also Richard Wright, "Where Are the Bodies? In the Ground," *The Public Historian* 32, no. 1 (Winter 2010): 98-99; Peggy O'Donnell, "'Gateway to Hell': A Nazi Mass Grave, Forensic Scientists, and an Australian War Crimes Trial," *Holocaust and Genocide Studies* 32, no. 3 (Winter 2018): 369–70.

3. Bevan, *A Case to Answer*, 98; Wright, "Where Are the Bodies?", 98-99; O'Donnell, "'Gateway to Hell'," 370.

4. Bevan, *A Case to Answer*, 87; Wright, "Where Are the Bodies?", 99; O'Donnell, "'Gateway to Hell'," 371.

5. Bevan, *A Case to Answer*, 85.

6. O'Donnell, "'Gateway to Hell'," 362, 365-66.

7. Bevan, *A Case to Answer*, 87.

As Professor Wright later observed, "We found these claims about the Serniki grave to be materialised in the soil."[8] The ramp, the orderly rows of bodies, the fractured skulls, the artificial leg: each detail preserved in testimony was corroborated by the ground itself. Yet the meaning of this recovery exceeded its evidentiary function. The Serniki excavation unfolded within a distinctly Australian framework of justice and memory.[9] The Special Investigations Unit (SIU), established in 1987 after public outcry that Nazi collaborators had settled in Australia, had tasked Wright, a Sydney-based archaeologist, with verifying whether the bodies alleged by witnesses truly lay beneath the pine forest. The exhumation, conducted jointly with Soviet scientists in the summer of 1990, was the first forensic mission by any Western war-crimes unit to recover Holocaust-era remains.[10] What emerged from the sand outside Serniki thus bridged continents and institutions: European atrocity and Australian accountability. The objects they retrieved entered a chain of custody that would end not only in legal archives but in the vitrines of the Sydney Jewish Museum (SJM).

What this scene makes visible is that before historical interpretation begins, environmental conditions have already shaped what evidence survives and how it appears. Evidence does not arrive intact from the past. Rather, it bears the mark of soil chemistry, burial depth, seasonal exposure, and concealment. Knowledge of the Holocaust is therefore formed through material mediation before it is ever narrated or theorised. In the context of the SIU investigation, the soil at Serniki was not backdrop but a condition shaping what evidence could be recovered; its texture, composition, and corrosion patterns enabled investigators to reconstruct the sequence of killing, and its stratigraphy preserved testimony beyond words. At the same time, while such environmental factors greatly impact the chances of survival and death during genocide, they do not act with intention. Instead, features such as soil composition and climate structure the field within which human action and later interpretation occur. To trace how Holocaust memory moves from landscape to archive to

8. Wright, "Where Are the Bodies?", 99.
9. David Fraser, *Daviborshch's Cart: Narrating the Holocaust in Australian War Crimes Trials* (Lincoln: University of Nebraska Press, 2011), see esp. chapters 2, 3, and 8.
10. O'Donnell, "'Gateway to Hell'," 362, 368-69.

gallery therefore requires attending to these environmental mediations through which violence becomes knowable.

This journey from ground to courtroom to museum traces the arc of an ecological approach to Holocaust museology, one that attends to how environmental processes condition the formation and legibility of historical evidence. The Holocaust museum-archive is therefore not a transparent repository of the past but the product of material mediations that precede and shape interpretation. Violence, concealment, preservation, excavation, conservation, and display are not separate stages but successive movements in which material traces are altered and stabilised. Each environment conditions what survives and how it becomes legible as evidence. During the Holocaust, human actors made decisions, enacted violence upon others, and bore responsibility. Yet environmental processes shaped the conditions within which those actions unfolded and the form in which they are later known. When objects they left behind enter the museum, they enter another environment that continues this mediation. Architectural space, conservation practices, and display framing structure the conditions under which material trace becomes public knowledge. Clarifying what this ecological framework entails requires positioning it within the broader theoretical conversation from which it partially draws.

Contemporary theoretical scholarship has emphasised the relational entanglement of humans, objects, and environments in the production of meaning.[11] Building on that insight, this article directs attention toward the question of how the material conditions that enable such encounters are themselves historically formed. Environmental processes condition the survival and legibility of material traces before any act of interpretation begins, and museums function as institutions that sustain and mediate these conditions across time. In the context of genocide, attending to such conditioning clarifies how material circumstances structured the field of violence and shaped the form in which it is later known. An ecology of the Holocaust, in this sense, names the historically specific mediation through which material traces become evidence

11. Actor-Network Theory, most closely associated with Bruno Latour and Michel Callon, proposes that humans and non-human entities participate symmetrically in networks of action, encouraging analysts to suspend hierarchical distinctions between persons and objects for methodological purposes. This approach has productively illuminated the relational character of technological systems, network infrastructures, and material culture. While this article shares ANT's attention to relational mediation, it directs that attention toward the formation of historical evidence rather than towards a theory of distributed agency in the Holocaust museum environment. Its concern lies not in attributing agency to objects but in tracing how material conditions shape what becomes legible as historical knowledge. In the context of genocide, ontological flattening carries particular risks. The Holocaust depended upon the systematic dehumanisation of Jews and the bureaucratic reduction of persons to disposable matter. Analytical symmetry between humans and objects, even when deployed heuristically, can obscure the moral asymmetry that remains central to historical interpretation. For historians and historically-minded museum practitioners, an approach grounded in evidentiary formation preserves the moral hierarchy while still attending to material mediation. By focusing on how environmental processes condition concealment, preservation, excavation, conservation, and display, the analysis clarifies the material infrastructure through which violence becomes archive and archive becomes memory. Ecology here, therefore, functions as a historically specific account of epistemic mediation rather than as a general ontology of distributed action.

and evidence becomes knowledge. Within this chain, the museum constitutes another environment in which an object's material condition and interpretive frame are altered. It is epistemic in this sense, structuring the conditions under which traces are encountered, stabilised, and interpreted as history. Just as soil chemistry and forest cover shaped concealment and preservation in the landscape, the museum's material and spatial arrangements shape how those traces become legible within public memory. This analysis does not presume to determine how individual visitors interpret these encounters. Rather, it examines how material and spatial conditions in the museum structure the field within which interpretation becomes possible. The museum does not act with intention but provides the conditions within which human judgment unfolds.

To understand this mediation requires following material traces across the environments through which their meaning shifts. The narrative movement of this article follows the environments through which material traces acquire historical meaning. While historians routinely trace the movement of texts and legal categories across contexts, here, the object of tracing is material *trace* itself. The analysis begins in the landscape, where concealment, decay, and preservation condition what historical evidence of atrocity survives. It then turns to forensic and juridical settings, where these material traces are stabilised as evidence. Finally, it examines the museum, where those traces are recontextualised within architectural and interpretive space. At each stage, environmental conditions alter the form in which the past appears. Throughout, human actors interpret, testify, and bear responsibility, while environmental processes shape the material field within which those interpretations become possible. In tracing this passage across environments, the article demonstrates how Holocaust memory is not transmitted intact but emerges through successive acts of material mediation. In order to understand what an ecological approach to Holocaust museology makes possible, it is first necessary to examine how the field has addressed the

relationship between material evidence and the conditions that form it.

Changing Landscapes of Holocaust Studies

From the outset, the narration of Holocaust history has been shaped by questions of scope and voice. Raul Hilberg's *The Destruction of the European Jews* (1961) offered the field its first comprehensive framework, tracing the bureaucratic "destruction process" through the categories of perpetrators, victims, and bystanders.[12] The power of Hilberg's work lay in its precision: the extermination of European Jewry was examined not through intent but through structure, in the slow accretion of administrative steps that made genocide possible. Yet in that precision, lived experience often receded. Survivors were present, but their voices were not yet the organising principle of historical understanding.[13] The bureaucratic paper trail that anchored Hilberg's narrative also defined how museums first visualised the Holocaust as a system of documents rather than a world of matter.[14] Exhibitions displayed decrees, deportation orders, and maps to render the scale of the Final Solution. Though unacknowledged, the landscape was already inscribed in this historiography not merely as backdrop, but as the terrain across which destruction moved, was administered, and was made possible.

By the 1980s, Saul Friedländer urged historians toward what he called an "integrated history," one that preserved the chronology of Hilberg's destruction process but synchronised it with the immediacy of personal voice.[15] The shift was more than methodological—placing the survivor at the moral core of Holocaust historiography. Where Hilberg anchored the Holocaust in bureaucratic documentation, Friedländer rendered it legible through the texture of lived experience. Testimony did not replace documentation but instead reoriented historical attention toward the lived environments in which policy was experienced. At the same time, the Holocaust museum became the space in which that integration took material form.

12. Raul Hilberg, *The Destruction of the European Jews*, rev. ed. (New York: Holmes & Meier, 1985), 8.
13. Saul Friedländer, *Nazi Germany and the Jews, Volume 1: The Years of Persecution, 1933–1939* (New York: HarperCollins, 1997), 22-28.
14. Avril Alba, *The Holocaust Memorial Museum: Sites of Conscience and Curatorial Practice* (London: Routledge, 2015).
15. Friedländer, *Nazi Germany and the Jews*, 22-28.

The SJM, founded in 1992 by Holocaust survivors, is a remarkable architectural expression of this historiographical turn. Where scholars sought to integrate documentation with testimony, curators and educators attempted to bring together memory and material presence. As Avril Alba has shown, the SJM's permanent exhibition was conceived within an intentionalist frame but articulated in a particularist register.[16] Their 1986 proposal envisioned the space as "a tribute to survivors, perpetuating the truth through their eyes and their words."[17] The museum's first curator, Sylvia Rosenblum, conceived of the space as fulfilling the Jewish injunction to remember, or *zachor*, and adopted the survivor perspective of the Holocaust as the final and ultimate expression of European antisemitism.[18] While informational panels and showcases offered historical scaffolding, they were designed primarily as a backdrop against which survivors narrated their own stories. The chosen site, Darlinghurst's 1923 Maccabean Hall, deeply reflected this ethos. The building, originally erected as a Jewish war memorial, links local and global histories as a monument to one generation of loss, became a vessel for another's experience.[19] Its architecture is the physical manifestation of *zachor*: the central staircase, whose ascending angles form a *Magen David*, embodies the integration of structure and spirit. In doing so, it spatially embodies a logic of interdependence between structure, memory, and material presence. The survivor's voice, the artifact salvaged from Europe, and the Australian architecture that enclosed them operate in relation, each conditioning how the others are encountered and understood. Light, temperature, and sound were carefully modulated to preserve fragile artifacts and to frame the atmosphere in which testimony was delivered. Testimony does not exist apart from the material conditions that sustain and transmit it. In circulating through the artifacts and atmosphere that preserve, amplify, and translate it, testimony reaches audiences in forms that ground its claims in physical presence. In other words, the museum does not simply narrate survivor history but structures the conditions under which voice and object are encountered together.

16. Avril Alba, "Australian Holocaust Museums: From Particular to Universal," *Journal of Museum Education* 49, no. 1 (2024): 14-18; Avril Alba, "Transmitting the Survivor's Voice: Redeveloping the Sydney Jewish Museum," *Dapim: Studies on the Holocaust* 30, no. 3 (2016): 16.
17. *A Proposal for the Establishment of a Jewish Holocaust Museum in Sydney*, 1986, 2. Sydney Jewish Museum Institutional Archives.
18. Sylvia Rosenblum, "Are Museums the Best Place for the Memorialization of the Holocaust?," quoted in Alba, "Australian Holocaust Museums," 16; Alba, "Transmitting the Survivor's Voice," 16.
19. Avril Alba, "Integrity and Relevance: The Sydney Jewish Museum at 25," in *Integrity and Relevance: The Sydney Jewish Museum at 25* (Sydney: Sydney Jewish Museum, 2017), 109-111; Alba, "Transmitting the Survivor's Voice," 14-18.

The timing of the SJM's founding situated it within a shifting legal and environmental context. In 1986, the Australian government established the SIU to pursue alleged Nazi war criminals living in the country.[20] This arm of the Australian War Crimes Commission brought the search for justice, and for physical evidence of atrocity, into public life. Its field missions to Serniki, Ustinovka, and Gnivan in Ukraine connected moral responsibility to landscape. When the objects recovered in those excavations, including bullet cartridges, bottle fragments, and dentures, arrived in Sydney, they entered a new interpretive environment. Their transposition from field to museum marked a change in the conditions under which they could signify. What had functioned as juridical proof in one environment became pedagogical matter in another. The objects did not change in substance, rather, the environment through which they moved altered their meaning.

The Australian context shaped this translation in crucial ways. The SJM arose in a multicultural society negotiating its own reckonings with exclusion and migration.[21] Survivor memory took root in a civic environment concerned with justice and belonging. This civic environment, shaped by a national forensic project and an immigrant community asserting visibility, imbued the museum with a distinctive tone that was pragmatic, affective, and self-consciously material all at once.[22] Its leadership was not abstractly adopting new theories of memory, but instead were responding to the moral and environmental realities around them. The museum thus became the site where intellectual developments in Holocaust interpretation took material form within a specific civic and climatic setting.

From its inception, then, the SJM reflected many of the questions that would later be articulated through environmental approaches. It made visible how historical understanding depends on the conditions that sustain it, such as how the soil of a Ukrainian forest could become the pedagogical substrate of a Sydney gallery, and how legal inquiry could crystallise into curatorial ethics. The museum's architecture, collection, and community together demonstrate that the Holocaust cannot be separated from

20. Fraser, *Daviborshch's Cart*, 60-61.
21. Alba, "Integrity and Relevance."
22. Alba, "Transmitting the Survivor's Voice," 244–45.

the material and social worlds that continue to hold its traces.

It is this proposition that recent scholarship has begun to articulate more explicitly.[23] Emerging in the 1970s, environmental history called attention to soils, forests, waters, and climates as conditions shaping human history.[24] Its premise was not to diminish human agency but to situate human action within material conditions that make it possible. Rather than displacing human agency, such approaches clarify the material field within which human action unfolds. In the context of the Holocaust, this perspective clarifies not only how violence unfolded in particular terrains, but how those terrains conditioned what could later be recovered, preserved, and known. The SJM's foundation, grounded in both forensic and museological translation, anticipated this intellectual development by treating landscape not as backdrop but as evidentiary substrate.

Only recently did Holocaust studies begin to put this principle into practice. Over the past two decades, Holocaust studies has expanded its analytical vocabulary through multiple methodological approaches. Memory studies, particularly in the work of James Young and Marianne Hirsch, shifted attention from event to transmission, asking how photographs, memoirs, and rituals mediated memory across generations.[25] Cultural and gender histories shifted the focus to everyday life and embodied experience, emphasising women's roles in caregiving and hiding, and the corporeal realities of hunger, illness, and sexual violence. The material turn drew attention to the objects and images through which the Holocaust is remembered, including clothing, household goods, and the haunting iconography of camp photography. Each approach complicated the traditional triad of perpetrator, victim, and bystander, pressing the field toward a more textured account of human experience. Collectively, they reoriented attention toward the concreteness of history as carriers of human experience. While these approaches foreground materiality and space, they have rarely examined how those environments shape

23. The "environmental question" in Holocaust studies has only recently gained traction and remains contested, particularly over how to recognise the agency of landscapes and nonhuman actors without obscuring human intent. Scholars such as Tim Cole and Jessica Rapson have examined forests, soil, and decay as active memorial agents, while cautioning against aestheticising nature or diffusing moral responsibility (Tim Cole 2014, 666–67; Rapson 2015, 31–33). Omer Bartov has similarly warned that ecological framings risk distorting the Holocaust's fundamentally human authorship (Bartov 2020, 423–25). *The Journal of Genocide Research*'s 2020 special issue on the environmental history of the Holocaust sought to identify a method through interdisciplinary approaches to this question while insisting that Holocaust studies must not abandon its moral core (Małczyński et al. 2020, 183–85).

24. William Cronon, "A Place for Stories: Nature, History, and Narrative," *Journal of American History* 78, no. 4 (1992): 1347–76.

25. James E. Young, *The Texture of Memory: Holocaust Memorials and Meaning* (New Haven: Yale University Press, 1993); Marianne Hirsch, *The Generation of Postmemory: Writing and Visual Culture After the Holocaust* (New York: Columbia University Press, 2012).

the evidentiary forms through which the Holocaust is later reconstructed and taught.

Museums translated these scholarly developments into curatorial practice. Exhibitions began to place testimony at the centre, echoing the imperatives of memory studies. They incorporated gendered perspectives and embodied narratives, attuned to everyday life as well as to death. They reimagined objects not as illustrative props but as material anchors of testimony, as shoes, letters, and photographs carried the traces of lived experience. They experimented with immersive installations and spatial reconstructions that allowed visitors to apprehend the geography of genocide.[26] At the SJM, these currents produced layered exhibitions that remained survivor-centred but drew on multimedia, architecture, and artifact to deepen the encounter. Yet even as curators wove together voice and material presence, the epistemic implications of this mediation, that is, how environments condition what can be known, remained largely implicit.

Academic historians, by contrast, have hesitated to follow where practice leads. Survivor testimonies often describe the environment as decisive, such as how hunger was worsened by harsh winters or how sheltering in the forest saved lives. Yet these dynamics, while vividly present in memory, have not been fully conceptualised as historical forces. Environmental approaches to Holocaust history face a persistent ethical tension. To describe snow as "betraying" fugitives or forests as "harbouring" escapees risks anthropomorphising nature in ways that blur moral accountability.[27] However, a small body of scholarship has begun to navigate this tension. Tim Cole's studies of forested landscapes, Jessica Rapson's analyses of commemorative ecologies, and Ewa Domańska's notion of ecological witness each expand the frame, though attempts to formalise an environmental approach have revealed dangers of conceptual drift. As Omer Bartov has cautioned, the Holocaust was a profoundly human crime.[28] Any framework that obscures that fact risks distortion. For this reason, many historians have preferred to leave environmental dynamics implicit rather than risk misattribut-

26. Avril Alba, *The Holocaust Memorial Museum: Sacred Secular Space* (London: Palgrave Macmillan, 2015); Alberto Giordano, Anne Knowles, and Tim Cole, "Geographies of the Holocaust," in *Geographies of the Holocaust* (Bloomington: Indiana University Press, 2014).

27. On the broader historiographical debate surrounding environmental approaches to Holocaust history, see footnote 23.

28. Omer Bartov, "What Is the Environmental History of the Holocaust?," *Journal of Genocide Research* 24, no. 3 (2022): 419–28, https://doi.org/10.1080/14623528.2021.1924587.

ion. The task, therefore, is not to assign agency to landscape, but to clarify how material conditions structure the field within which human action unfolds and how its traces endure.

While scholarship may deliberate over definitional boundaries, museums must make interpretive decisions in practice. A corroded cartridge, a soil-stained button, or a shard of an oxidised green bottle, recovered from a mass grave and displayed in a case at the SJM, cannot remain inert. They must be explained for audiences who have never seen the pit from which they were taken. The very act of exhibition compels narration. That narration makes visible what historical writing often leaves implicit: that testimony and artifact are always encountered through the environments that carry them forward. In the investigation, a witness stood in a forest clearing, spoke before investigators in a courtroom, and finally saw the culmination of that process represented within a gallery. At each stage, the surrounding conditions altered what could be preserved, seen, and understood. It is in this chain of translation from ground to courtroom to museum that the ecological dimensions of Holocaust history become unavoidable. To recognise this is not to assign agency to landscape, but to acknowledge that material conditions structure the field within which action occurred and within which its traces endure. Where scholarship hesitates, museums must translate. It is in this pedagogical practice, already embedded in the survivor-authored DNA of institutions like the SJM, that an ecology of the Holocaust as an account of how environments and human lives were bound together in destruction and survival can most fully be articulated.

The SJM's display of the Australian War Crimes Commission materials exemplifies this. The objects are not illustrative props but forensic fragments, material witnesses that draw together human suffering and environmental trace. Their placement in the museum forces audiences to confront the Holocaust not only as a human act but as one inscribed in landscape. This, in effect, is the ecological method already practiced by museums: an ethics of interpr-

etation that keeps the human at the centre while acknowledging the material systems that register and sustain memory.

The challenge, then, is not whether the environment matters but how to narrate it responsibly. Museums may offer a path forward. Such narration must preserve the primacy of human voice while situating that voice within lived environments. Because artifacts cannot remain inert, curators must weave them into stories that preserve the moral centrality of testimony while situating that testimony in lived environments. Educators may align the evidentiary with the affective, helping visitors “hear” the victim's voice without losing moral clarity. A cartridge is understood through the witness who heard it fired. A green bottle fragment through accounts of drink distributed to executioners. Dentures and hair through testimony describing shallow graves where bodies were left to decay. These are ecological stories, but they are told through testimony and pedagogy rather than abstract theorisation. In this way, museums demonstrate how an environmental history of the Holocaust can be written in narrative form as an ecology that acknowledges the entanglement of people, places, and conditions without ever displacing the human core of the crime. To name these curatorial translations as ecological is not to introduce theory from above, but to clarify the structure already at work by holding matter, voice, and landscape in deliberate relation. The SJM offers an unusually precise instance of this structure, having assembled its core collection from the same forensic investigations in which environmental conditions first shaped what could be recovered and known.

The Sydney Jewish Museum as Environmental Archive

The SJM is built around a central staircase, its ascending angles forming a *Magen David* that rises through the building's core. At each level, visitors pause before corners where fragments of the Holocaust are anchored in glass. In one of the quietest corners, until the current renovations began, stood a vitrine titled *Unearthing the Evidence*. Within lay objects recovered from mass graves in Ukraine:

eight corroded cartridge casings, a jagged green bottle fragment, a set of dentures with a fractured plate and a dislodged tooth, a blue button, a necklace, a watch threaded on a length of cord, a small bundle of hair.[29] Each artifact bears the imprint of its environment. Their present condition is not incidental but the product of soil chemistry, moisture, mineral content, and time. The cartridges, their surfaces eaten away by rust, registered the chemistry of the soil that had both concealed and preserved them. Their oxidation traces the dampness of the ravine while their warped edges recalled the mechanical regularity of the killing that placed them there. The bottle fragment points not only to the intimate violence of execution but also to the rituals of environment and body that accompanied it: drink dulling human conscience, the shattering of glass against forest ground. The dentures, the tooth still clinging to its broken plate, are unmistakably human, shaped by decades of burial and exposure. Even the button and necklace, fragments of daily dress, carry the uneven patina of decomposition, their materials responding differently to moisture, mineral, and time. The case thus functions not merely as display but as a preservation of environmental process, holding within glass the material consequences of landscape. No sound accompanies the display except the steady hum of the air-handling system that keeps the air dry enough to arrest further corrosion. It makes visible another layer of mediation: the museum must now create an artificial climate to stabilise the traces left by the original one. The vitrine preserves not only artifacts but the environmental conditions that shaped them, rendering the museum a secondary archive of landscape.

Together, these fragments demonstrate how destruction and its afterlife are conditioned by environment. The *Unearthing the Evidence* showcase thus offered more than an arrangement of artifacts, presenting a material record of how atrocity is inscribed simultaneously in bodies and landscapes. The vitrine, then, operates as an environmental archive. It preserves not only objects, but also the processes that altered them, stabilising corrosion, decay, and mineral trace as historical evidence. In the still

29. Sydney Jewish Museum, Unearthing the Evidence, exhibition description (archival copy, 2023); see also Graham Blewitt, "The Serniki Mass Grave," Graham T. Blewitt: Nazi War Crimes Investigations in Australia, accessed October 2025, https://grahamtblewitt.com/the-serniki-mass-grave/.

air of that corner, testimony, material trace, and environmental process are held in deliberate relation. The case teaches, through its very arrangement, that to recover the past is to attend not only to what was done but to the earth that bears its imprint, and to recognise that memory depends on the physical conditions that allow material evidence to endure.

"Unearthing the Evidence" and the Pedagogy of Display

The *Unearthing the Evidence* showcase began far from the quiet climate of the SJM. Its artifacts were first retrieved from the ground by the Australian SIU, whose missions to Serniki, Ustinovka, and Gnivan between 1990 and 1992 were part of an ambitious, belated effort to locate and prosecute suspected Nazi war criminals living in Australia.[30] The SIU's 1990 excavation at Serniki marked a turning point in the practice of Holocaust investigation. It was the first time a Western government undertook the forensic recovery of human remains from a wartime mass grave for the purposes of legal prosecution.[31] These were not excavations so much as they were acts of forensic witnessing, in which archaeology, jurisprudence, and moral repair converged. The site, located on the edge of the village and long since overgrown with pine, required investigators to locate traces that had been absorbed into the natural world. Beneath the forest floor, they uncovered the remains of more than five hundred victims, predominantly women and children, together with cartridge casings, fragments of clothing, dentures, jewellery, and shards of glass.[32] The exhumation confirmed the sequence of events known from testimony: that Serniki's Jewish population had been assembled, marched to the outskirts, and executed in groups. On the surface, this was a triumph of forensic method as evidence had systematically been gathered that corroborated historical testimony. Yet the deeper the investigators dug, the more they confronted the limitations of the very procedures they relied on. The grave was not a static archive of crime, but an environment shaped by ongoing material processes. Cartridges oxidised

30. Fraser, *Daviborshch's Cart*; See also Blewitt, "The Serniki Mass Grave."
31. O'Donnell, "'A Gateway to Hell'," 363-65.
32. O'Donnell, "'A Gateway to Hell'," 362-363; Wright, "Where are the Bodies?" 99.

differently depending on acidity. Hair survived only where moisture was low. Bones in clay dissolved faster than those in sand. Soil chemistry, water saturation, and mineral composition thus conditioned both the survival and the legibility of evidence. The altered condition of the remains shaped not only what investigators could recover, but how that recovery would later enter legal and historical interpretation. Tree roots and soil formations had entwined with the remains, creating a stratigraphy that reflected both atrocity and aftermath. The site was both a record of historical violence and a record of environmental change.[33] The violence was human, environmental processes reshaped its material residue.

The exhumation exposed the limits of what might be called forensic positivism: the belief that material traces can yield unambiguous proof if examined with sufficient rigor.[34] The investigators' procedures, including gridding the site, photographing each layer, carefully sealing and labelling samples in sterile bags, aimed to impose order on instability.[35] However, the boundaries between evidence and environment could not be disentangled without distortion. A cartridge embedded in clay was not the same artifact as one resting in dry soil, as it had aged differently and therefore accrued a different meaning.[36] The condition of the site complicated the binaries that legal proceedings depend upon: human versus nonhuman, animate versus inanimate, subject versus context. The epistemic difficulty facing the SIU was not procedural but rooted in the nature of the evidence itself. In other words, the problem lay not in method but in the material form through which the past endured. The mass grave exposed a tension between juridical requirements for stability and the material instability of environmental trace. In the courtroom, evidence must remain stable long enough to sustain judgment. In the earth, evidence continues to transform. The crime was human in origin, but the instability arose from the material conditions in which its traces endured. Legal judgment depends upon fixed categories of proof, yet environmental alteration ensures that evidence remains materially dynamic. The landscape preserves traces over a

33. O'Donnell, "'A Gateway to Hell'," 362-63.
34. Wright, "Where are the Bodies?" 97-99.
35. O'Donnell, "'A Gateway to Hell'," 369-72.
36. Bevan, *A Case to Answer*, 81.

temporality that legal procedure cannot easily accommodate. Environmental processes continue to reshape material evidence long after the act of violence itself.

When the SIU's findings returned to Sydney, their evidentiary function was effectively complete.[37] No convictions would follow as the demands of the courtroom could not be met by the material logic of the earth. Yet in that outcome, another form of interpretation became possible. When the artifacts were transferred to the custody of the newly founded Holocaust museum in Sydney, their moral and historical significance was reinterpreted. The shift from legal evidence to curatorial object marked a change in evidentiary framework. In the courtroom, the cartridge or denture derived significance from its capacity to prove a particular event. In the museum, their significance resided in relation and resonance. The corrosion that complicated legal reliability became, in the museum, evidence of prolonged environmental exposure. The stains, fractures, and mineral growths that complicated identification now testified to time's endurance. What had complicated their authority in law, in effect became central to their interpretive value in the museum.[38] Their altered surfaces reflected decades of burial, moisture, and mineral transfer, making environmental process itself part of the historical record. Their fragility required a different mode of interpretation, one attentive to environmental conditioning rather than juridical stability.

The museum's curators understood this transformation instinctively. They inherited from the investigators not only the objects but the ethic of care that had governed their recovery. None of the artifacts were polished or restored.[39] They were preserved under carefully regulated environmental conditions, making conservation itself a form of acknowledgment. The objects had ceased to function as instruments of proof and had entered a new interpretive framework of remembrance. In this context, interpretation depended on attentiveness to material condition rather than restoration to ideal form. To preserve was to listen, to maintain equilibrium between exposure and protection.

37. Blewitt, "The Serniki Mass Grave."; See also Fraser, *Daviborshch's Cart*, 242-62.

38. This shift in authority reflects a broader argument within museum studies that objects do not possess fixed evidentiary meaning but acquire interpretive force within the institutional frameworks in which they are situated. Eilean Hooper-Greenhill has argued that objects are "polysemic" and "mute," their meanings constructed through the discursive and spatial regimes that frame them. Displayed objects, she writes, are "made meaningful according to the interpretive frameworks within which they are placed," (8) and "things mean differently in different contextual settings" (15). Susan A. Crane similarly contends that museums do not simply transmit stable historical truth but mediate memory through processes of selection, distortion, and narrative framing, such that material fragments acquire meaning through interpretive transformation rather than evidentiary fixity. Within this theoretical tradition, the instability that undermines juridical proof can become the very condition of museological significance. Thus, once they arrived at the SJM, the objects' altered surfaces were not treated as evidentiary deficiencies but were preserved and displayed as material witnesses to environmental process, thereby reconfiguring what had once limited their legal utility into a different form of historical authority. Eilean Hooper-Greenhill, *Museums and the Interpretation of Visual Culture* (London: Routledge, 2000); Susan A. Crane, "Memory, Distortion, and History in the Museum," *History and Theory* 36, no. 4 (1997): 44–63, https://doi.org/10.1111/0018-2656.00030.

39. Roslyn Sugarman, Head Curator, Sydney Jewish Museum, discussion with the author regarding the Unearthing the Evidence display, Sydney, September 2024.

Conservation thus becomes part of the evidentiary chain, shaping how artifacts endure and how they can be understood. What passed from the field to the gallery, then, was not merely evidence but the ethos that ethical responsibility includes the care of material traces through which human history is known. In the quiet of the *Unearthing the Evidence* case, this principle found its fullest expression. The museum did not resolve the contradictions that had confounded the courtroom but rather held them in view as part of the museum's interpretive practice.[40]

The physical arrangement of the display translated the grammar of excavation into curatorial form. In the field, investigators documented the precise position of each find, including its depth, its orientation, the material surrounding it. In the museum, this spatial relationship was re-presented through the vitrine's composition. The cartridges lay in a neat line at the base, their horizontal order evoking both the trench and the firing squad. Above them, the bottle fragment and watch are placed slightly higher, evocative of the mid-layer where soil met air. Diagonally placed are the dentures and the blue button, suggesting the temporal sequence of burial and exposure. The result was a vertical cross-section of the grave, or a curatorial stratigraphy that made visible how violence entered and was preserved within layered environments. In this way, the museum functions as an environmental archive because it preserves not only objects but the spatial logic through which those objects were recovered. The gallery staged the grave as an object of interpretation rather than excavation, its glass walls and lighting isolating the artifacts so that environmental trace could be examined without disturbance.[41]

The museum's ecological work, then, operates across interconnected environments rather than discrete institutional stages. Field, courtroom, gallery, and archive each alter the conditions under which material evidence is encountered and understood. The same ethos of care that guided the investigators in Serniki reappears in the museum's practices of display and storage. Whether under

40. Alba, *The Holocaust Memorial Museum*.
41. *Unearthing the Evidence*, Sydney Jewish Museum, Sydney, (temporarily deinstalled for renovations, 2024).

the lights of the museum floor or in the measured darkness of the storeroom, their preservation requires controlled environmental conditions that stabilise the traces left by earlier exposure and concealment. To tend to them is to acknowledge that revelation and reticence both shape how visitors encounter and interpret human remains and artifacts. This layered ecology extends the museum's founding logic by embedding testimony within systems of environmental control that preserve material trace, into the very infrastructure of preservation itself. In this way, the archive makes visible the museum's environmental method: preservation itself becomes part of how Holocaust history is stabilised and known.

Invisible Ecologies: The Acorn in the Archive

If *Unearthing the Evidence* demonstrates how the museum's curators transformed the residues of the earth into an act of public pedagogy, the museum's archive preserves another, less visible form of ecological mediation. Not every artifact can be placed on public display. Some, by their material nature or their interpretive ambiguity, remain in storage, awaiting future interpretive contexts in which their significance may be reconsidered. These unseen materials may appear secondary to the museum's mission but are surprisingly integral to it. Their preservation depends upon controlled environmental conditions that prevent further decay and maintain evidentiary integrity. The museum's archival practice makes visible the understanding that knowledge is not limited to what is exhibited but depends upon what is preserved and stabilised for future study. One such artifact, drawn from the same fieldwork that produced the Unearthing display, lies within the museum's holdings from the 1992 excavation at Gnivan, Ukraine: a forensic photograph documenting an acorn found among human remains in the soil.[42]

The image is precise and austere: a cluster of human ribs, brittle and grey against the soil, and, nestled among them, the cup of an acorn about a centimetre across.[43] The seed had detached but lay nearby, dislodged yet unmistakably

42. Sydney Jewish Museum, Photographs: Acorn and Acorn Cup among Human Remains, Gnivan, Ukraine, photographed by Sergeant Steve Horne, July 1991, accession nos. M1996/032:141, M1996/032:143, and M1996/033:011, Sydney Jewish Museum Collection, Sydney.
43. SJM, M1996/033:011.

linked. Investigators recorded the detail with the same diligence applied to cartridges, textiles, and dentures. Its provenance was logged as an oak, genus *Quercus robur*, common to the mixed forests of Podolia. Its state of maturity was also noted, as the acorn had ripened in the late summer of 1942. That botanical detail helped establish the massacre's chronology within the late summer of 1942. The vegetation suggested a mast year, a rare surge in the oak's reproductive cycle that followed several years of scarcity. During mast years, acorns accumulate in large quantities, a seasonal pattern that coincided with the period of mass killings in the region. The seasonal cycle of oak reproduction coincided with the systematic destruction of Jewish communities in Podolia. As the landscape was in bloom, the human world was collapsing. The acorn's presence situates the killings within ongoing ecological cycles that continued according to biological rhythms. These ecological rhythms intersected with human violence but operated according to different temporal scales.

Gnivan lies nearly two hundred kilometres south of Serniki, in a zone where oak and beech forest give way to agricultural clearings and loess-rich soil. Where Serniki's grave was veiled beneath a postwar pine plantation, Gnivan's grave lay within an open agricultural landscape.[44] When the SIU began work there in May 1992, the contrast was striking. The excavation team faced neither dense roots nor waterlogged clay, but compact loam patterned by leaves and limestone fragments. The grave held 102 victims, their positions largely undisturbed after nearly fifty years. Stratigraphic layers were clearly visible, alternating bands of brown soil and pale ash. These soil conditions produced unusually clear stratigraphic visibility: where Serniki's postwar forest altered and obscured material traces, Gnivan's open conditions preserved stratigraphic relationships with comparatively little disruption. Among the skeletal remains, the investigators found cartridge cases, wire, dentures, jewellery, and the single acorn, logged beside the individual marked No. 00050. Its inclusion in the record followed standard evidentiary procedure, yet it expanded the range of materials considered probative. The

44. Blewitt, "The Serniki Mass Grave."

acorn demonstrated that environmental data could corroborate testimonial and forensic evidence, linking seasonal rhythms to the temporal coordinates of atrocity. Oak reproductive cycles provided chronological markers that investigators could use to situate the killings within seasonal time.[45]

When the materials from Gnivan were transferred to Sydney, the acorn entered a new institutional and environmental context of preservation.[46] No longer functioning as a datum within a criminal investigation, it was catalogued and preserved within the museum's archival system, where environmental controls regulate temperature, humidity, and light exposure. Unlike the objects displayed in *Unearthing the Evidence*, it was never mounted for exhibition. Its organic fragility made long-term exposure impossible, and its evidentiary significance is not immediately legible without contextual explanation. Yet in its invisibility the acorn illustrates another dimension of the museum's institutional work: the quiet work of stewardship that sustains meaning beyond display. The SJM has long understood itself as an institution of transmission, designed to communicate history through voice, presence, and encounter.[47] Testimony sits at its centre with survivors narrating their stories in the first person, and the museum's architecture organised around that oral core. The acorn extends that conception of transmission by demonstrating that material conditions also shape how testimony is preserved and interpreted.

This expansion situates the museum's human-centred pedagogy within the material conditions that sustain it. The acorn's transfer from field to archive demonstrates how evidentiary material is recontextualised within educational frameworks. In the courtroom, the acorn would have served as botanical proof, a temporal marker confirming the month of death. In the museum, its evidentiary function shifts from forensic proof to contextual interpretation. The museum's collections therefore include materials altered by environmental processes that condition how human actions are later documented. To bring such materials into curatorial care is to acknowledge that the physical world

46. Blewitt, "The Serniki Mass Grave."
47. Alba, "Transmitting the Survivor's Voice."

retains traces that historians and curators interpret as evidence. The acorn's presence within the archive thus shows how soil chemistry, vegetation, and climate shape the preservation of material trace, and how the museum's work extends this preservation into institutional space.

So, too, the acorn's archival preservation exemplifies the SJM's ethos of attentiveness. Organic matter continues to deteriorate unless stabilised through controlled environmental conditions. The museum's conservators have chosen not to mount or restore it, stabilising it within controlled temperature and humidity to slow further deterioration. This decision reflects an institutional ethic of conservation. Its condition demonstrates that preservation sometimes requires limiting display in order to maintain evidentiary integrity. If the *Unearthing the Evidence* showcase represents the museum's public exhibition practices, the acorn belongs to its archival preservation practices. Together, they form a single interpretive continuum where exhibition depends on archival preservation, and preservation depends on interpretive frameworks that render material trace meaningful. Each depends on the other for the museum's overall function.

In its current state, unseen by visitors and consulted only occasionally by scholars, the acorn illustrates the museum's potential to expand its interpretive framework. It demonstrates how the museum's established logic of transmission can incorporate environmental conditioning as part of historical interpretation. The survivor's voice remains the museum's moral centre, while the material conditions that preserved that testimony form part of its historical context. Integrating such perspectives would not alter the museum's human core but would enrich it, situating individual experience within the environmental and material systems that shaped how it was recorded and preserved. The acorn is an example of evidentiary material whose significance emerges through careful historical analysis, waiting for curatorial and scholarly attention to bring its meanings to light. Within this interpretive framework, it links ecological temporality to the museum's ongoing work of historical and moral education.

Towards an Ecology of the Holocaust

The SJM has long framed moral knowledge as emerging through encounters between testimony, object, and audience.[48] An ecological framework extends this institutional logic by making explicit the material conditions that structure those encounters. To adopt an ecological approach may involve reframing the museum's mission not as the preservation of static artifacts but as the maintenance of interdependent historical relations between human experience and the environments that shaped it, as well as between the material conditions of destruction and of remembrance. It involves recognising that genocide unfolded within specific physical environments that shaped both destruction and preservation. In this sense, ecology is not an interpretive supplement but a next possible phase in the museum's moral pedagogy that situates moral education within the material conditions that sustain historical evidence. In doing so, the museum shifts from implicit environmental awareness to an explicit methodological stance.

An ecological approach begins with the premise that human experience unfolds within and is conditioned by specific physical environments. It asks not only how people acted within a landscape, but how environmental conditions structured the historical possibilities of life and death. To think ecologically is to trace these interdependencies. It requires scholars to consider the Holocaust as both a human and material event, and to see the museum as a site where material evidence and testimony are deliberately held in relation. For the SJM, the ecological approach clarifies a principle that has long governed its practice, even if rarely named, that meaning emerges through reciprocal relation. This principle has long structured the museum's moral and intellectual life. The survivor's story gives the artifact resonance while the artifact anchors the story in the physical world it evokes. Each illuminates the other, establishing a reciprocal relationship that grounds education in material evidence. The museum's educators, curators, and staff maintain these interpretive relations in daily practice, preserving fragile materials while rendering

48. *A Proposal for the Establishment of a Jewish Holocaust Museum in Sydney*, 1986, 2. Sydney Jewish Museum Institutional Archives; Alba, *The Holocaust Memorial Museum*.

them historically intelligible. The result is an institution where preservation and interpretation operate as mutually reinforcing components of historical understanding.

What distinguishes the SJM among Holocaust institutions is how explicitly its interpretive method is shaped by its geographic and civic location.[49] Australia's Jewish community, largely composed of Holocaust survivors and their descendants, made the museum a living extension of its collective biography. Memories formed in Europe were carried into a different physical and civic environment, one marked by distance, refuge, and the moral project of multiculturalism. In this setting, the museum's task was never merely commemorative but integrative: to relocate the history of European catastrophe into Australian public education and civic discourse. That process, at once personal and communal, has given the SJM a pedagogical model grounded in proximity between survivor, artifact, and audience. Its exhibitions do not simply narrate the Holocaust from afar, but they bring into relation different geographies, generations, and evidentiary forms. The forensic artifact from Ukraine and the survivor's voice from Sydney are interpreted within a shared institutional framework that links environmental trace and lived memory. Together they demonstrate how environmental evidence and survivor testimony are stabilised within a single interpretive practice.

Recognising this structure clarifies that the SJM has long operated through an ecological logic, even if not by name. Its epistemology is inherently relational. In other words, its collections, architecture, and community operate together to preserve and generate historical knowledge. These elements function interdependently across preservation, interpretation, and education: the survivors who give testimony, the curators who shape its form, the objects that hold its traces, and the audiences who carry it forward. This framework situates moral witness within the material and communal conditions that sustain it. In its next phase, as the museum reimagines its design and pedagogy, this logic can be made explicit in exhibition design, archival description, and educational programming. Making this

49. Alba, "Transmitting the Survivor's Voice," 244-49.

ecological structure visible would clarify how preservation and pedagogy are already organised around environmental interdependence.

This reframing suggests a methodological shift for Holocaust museology more broadly. Traditional museum methodologies often treat artifact, narrative, architecture, and education as discrete domains rather than systemic relations. An ecological model instead understands these elements as interdependent. Objects function within interpretive frameworks that connect them to testimony, space, and audience. Museum design structures how material evidence and moral interpretation are encountered. Visitors participate in the interpretive process through acts of attention and response. Such a model does not apply ecological metaphor to the museum but clarifies what its best practices already imply. Knowledge in the museum is produced through the coordinated management of space, light, narrative framing, and audience engagement. The museum is sustained through the continual interaction of preservation and interpretation. Its ethical force derives from its ability to preserve material trace while enabling responsible reinterpretation.

For the SJM, adopting this ecological framework would make explicit the material logic already embedded in its practice. The museum's collections and practices demonstrate that remembrance depends on the preservation of physical trace. The *Unearthing the Evidence* display and the acorn preserved in the archive illustrate how environmental processes structure both destruction and its documentation. To integrate these insights at the institutional level would be to redefine the museum's mission as one that integrates environmental awareness into its ethical mandate. It would invite curators, educators, and conservators to see their collective labour as part of a coordinated institutional practice linking conservation, interpretation, and education. By articulating this principle, the museum could offer to the broader field of Holocaust commemoration a clarified methodological framework grounded in its existing practice—the recognition that remembrance itself is an environmentally-

mediated act, sustained by the delicate maintenance of the conditions that allow material evidence to remain legible over time. The SJM's ongoing redesign offers a rare opportunity to make these material and interpretive relations legible within exhibition design and archival presentation by making the relationships between object, voice, and place perceptible as the organising logic of the institution itself. Doing so would not alter its founding principles but clarify their institutional structure. The ecological approach gives form to what the museum has long practiced: that remembrance depends on sustained material conditions.

Tracing the movement of these materials from landscape to archive to gallery clarifies the chain through which environmental conditioning becomes historical knowledge. The museum's collection holds the rare privilege of objects whose journeys can be charted in both forensic and geographic space. The objects from Serniki and the acorn from Gnivan were first extracted from the environments in which they endured the processes of burial, oxidation, and decay before being re-situated in Sydney's institutional and pedagogical sphere. Within the museum, conservation practices, spatial sequencing, and interpretive framing establish the final conditions under which these traces become legible as history. Display labels can integrate the material conditions that shaped each artifact's formation: where it was found, what natural forces preserved or altered it, how environmental processes continue in conservation practices. Such an approach would not aestheticise decay but historicise it, recasting material processes into sources of interpretive depth. In making these transitions visible, the museum completes the environmental mediation through which material trace becomes historical understanding.

The museum's educational programs extend this mediation by structuring how testimony and material trace are encountered together. The SJM's education programs have long derived their meaning from encounters between testimony and listener. Survivor testimony does not merely accompany objects but reinterprets them, restoring human

subjectivity to material remains whose environmental histories have shaped their form. Lessons can extend this mediation by drawing attention to the environments that structured both suffering and survival. Students can consider how forest concealment shaped the narratives of Jewish partisans, how the geography of rural Ukraine conditioned both killing and rescue, and how climate and terrain dictated the logistics of flight and survival. Ideally, they may learn how environmental processes structured concealment and preservation, but they did not ultimately enact violence. Environmental history can be taught alongside testimony, not as parallel content but as interpretive context. The aim would be to frame these conditions as part of historical explanation. In doing so, the museum situates moral witness within the material conditions that made both destruction and survival historically possible.

Conservation extends the chain of environmental conditioning into institutional space. The museum's conservators establish the material conditions under which fragile traces remain legible through regulating light, humidity, and temperature. By doing so, they condition the preservation of material forms through which meaning can later be interpreted. These interventions stabilise the material form through which meaning can be interpreted. Just as soil chemistry and climate shaped preservation in the landscape, museum microclimates now structure the continued survival of evidence. Making conservation processes visible would clarify that remembrance depends on sustained material regulation. In this way, conservation marks the final stage in the environmental mediation through which material trace becomes historical knowledge.

An ecological approach to Holocaust commemoration, therefore, does not describe a worldview of interconnected beings. Rather, it names the historically specific processes through which material conditions shape what survives, how evidence appears, and how knowledge of the Holocaust is formed. The movement traced through this article, from forest floor to excavation site, from courtroom

to museum and archive, demonstrates that Holocaust memory is formed through a sequence of material mediations. The museum constitutes the final environment in this chain, conditioning how material trace becomes legible as public history through conservation, spatial framing, and testimony. To think ecologically about Holocaust remembrance is therefore to historicise the material mediation through which past violence becomes present understanding. It is to shift attention from objects as representations to objects as environmentally conditioned traces whose meanings emerge through movement across environments. The Sydney Jewish Museum's collections enact this mediation daily through the care of material, the preservation of testimony, and the practices of education that sustain remembrance. In this framework, ecology is not an external lens applied to Holocaust history but names the very conditions by which memory takes root.

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