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Title	Blue Death Studies: Theorising the water-corpse interface
Authors	Peterson, Jesse;Bezan, Sarah;Falconer, Kate
Publication date	2024-12-06
Original Citation	Peterson, J, Bezan, S & Falconer, K 2024, 'Blue Death Studies: Theorising the water-corpse interface', Lagoonscapes, vol. 4, no. 2, pp. 319-338. https://doi.org/10.30687/LGSP/2785-2709/2024/02/004
Type of publication	Article (peer-reviewed)
Link to publisher's version	https://doi.org/10.30687/LGSP/2785-2709/2024/02/004 - 10.30687/LGSP/2785-2709/2024/02/004
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Download date	2026-11-08 16:13:48
Item downloaded from	https://hdl.handle.net/10468/18720



UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

e-ISSN 2785-2709

Lagoonscapes
Vol. 4 – Num. 2 – December 2024

Blue Death Studies: Theorising the Water-Corpse Interface

Jesse D. Peterson
University College Cork, Ireland

Sarah Bezan
University College Cork, Ireland

Kate Falconer
University College Cork, Ireland

Abstract In this article, we theorise a Blue Death Studies approach to investigate deathly concerns and the people, places, and practices connected to them. Doing so highlights possibilities for rethinking death as watery and mobile rather than sedimentary and sedentary. To ground this theorisation, we explore how water impacts the ir/retrievability of the dead by analysing liquid (sea drownings and alkaline hydrolysis) and frozen deaths (cetacean samples, mountaineers, and cryopreservation). From this, we underscore how waters affect the ir/retrievability of matter and meaning in death and indicate future directions for a blue death studies.

Keywords Water. Human and nonhuman animal corpse. Death Studies. Blue humanities. Multispecies studies.

Summary 1 Introduction. – 2 Towards a Blue Death Studies. – 3 Liquid Deaths. – 3.1 Submersible Bodies. – 3.2 Aqueous Bodies. – 4 Frozen Deaths. – 4.1 Stranded Bodies. – 4.2 Exposed Bodies. – 5 Conclusion.

Edizioni Ca'Foscari

Peer review

Submitted 2024-07-29
Accepted 2024-10-24
Published 2024-12-06

Open access

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Citation Peterson, J.; Bezan, S.; Falconer, K. (2024). "Blue Death Studies: Theorising the Water-Corpse Interface". *Lagoonscapes*, 4(2), 319-338.

DOI 10.30687/LGSP/2785-2709/2024/02/004

1 Introduction

A terrestrial bias inflects our understanding of the dead. In Western civilisation, the space of the dead is traditionally underground, deep in the dirt. Placing bodies in the ground paves the way for memorials (e.g. headstones), cemeteries, human composting, and other practices that intimately connect corpses with earthly places and multispecies processes of decomposition. By no means unique to death, this terrestrial bias exists, we argue, as an expansive and yet also deeply limiting hegemonic lens. Although it assists in the ordering of time and space for humans and for the health of the planet, the geologic record represents a 'history' of the earth by which ages, epochs, periods, eras, and eons are determined through the metrics of quantifiable sediments embedded in layers of strata. But what of the fluid and mobile ecologies of water, and of their circulatory pathways? What of the potential for interspecies and cross-elemental exchanges at the water-corpse interface? Proceeding from the vantage point of a hydrological (rather than geological) critique of the Anthropocene, in this article we theorise a Blue Death Studies (BDS) that views the human and nonhuman animal corpse as a site of fluid undertakings between bodies and elements. In doing so, we seek to move beyond the dirt and dust fetish of Anthropocene discourse that interprets planetary and species death through solely geologic remains and incite a renewed critique in which we ask how, and in what ways, the dead might come to matter through alternative forms such as water.

Our motivation to develop BDS (Part 2) is guided by emerging scholarship in the blue humanities and critical ocean studies, areas that explore the complex meanings of seas and watery ecologies as they are represented in creative texts, historical archives, and cultural events across the globe. We are also inspired by proponents of queer death studies, who draw upon transdisciplinary methods to "attend to the problem of death, dying and mourning in current environmental, cultural, social, bio- and necropolitical contexts" (Radomska et al. 2020, 81). By bringing blue humanities and queer death studies together, we posit that an understanding of death might be reoriented by thinking how the dead interface with substances beyond earthly elements. Our aim is to explore the human and nonhuman animal corpse as a site of focused and prioritised critique within these two broadly conceived fields, and to make a case for the abundance of meanings produced at this interface.

What a theorisation like this can risk is sketching parameters too wide, or too narrow, to be of much use to researchers across diverse fields. We aim to mitigate this risk by employing an analytical approach that explores the ubiquity of water and focuses on evocative case studies that illuminate its deeper meanings. Hence, we offer a theorization of BDS that interprets human and nonhuman animal

material cultures *synoptically* (presenting a non-reductive indexical assessment) and *diagnostically* (offering an analysis of specific contexts and processes) (Bezan, McKay 2022, 4). This dual method allows us to open up a new intervention in the field while avoiding overly prescriptive terms that might limit further investigation and analysis by other scholars.

In line with this dual method, in Parts 3 and 4 we use a BDS lens to map the water-corpse interface to offer some diagnostic depth. The specific intervention we make addresses water as a substance that offers significant challenges for retrieving the dead but also the promise of retrieving life and/or meaning from 'dead' bodies. Retrieval in this sense therefore demarcates both possession (to 'gain ownership') and restoration or recovery. From our perspective, water offers an example *par excellence* of death as ir/retrievable because it creates conditions by which retrievability becomes im/possible. First, we inquire into water as liquid, touching upon the submerged bodies below the surface of water and bodies turned aqueous through alkaline hydrolysis – a funerary technology that liquifies corpses. We then inquire into water in its solid form, exploring frozen bodies on mountaintops and human and nonhuman animals subjected to cryopreservation. Analysing both liquid and frozen death allows us to expose the necropolitical and ecological limits and potentials of ir/retrievability. In this analysis, we ask how water makes the deceased ir/retrievable, examining whether such ir/retrievability matters and for whom.

2 Towards a Blue Death Studies

Taking care of the dead is a spatialising practice that has – for many, and for millennia – been primarily defined in relation to earth. In traditional burial, for instance, humans treat their deceased by transporting their bodies from the domicile to the underground. This practice has roots deep in our ancient past: humans have long felt an innate urge to place their deceased into the ground to define time and place (and the place of humans in both) (Harrison 2003). Particular understandings about particular categories of dead bodies flow from this concomitancy of earth, death, and meaning. Missing bodies, for example, are often regarded as being untethered from place. No longer rooted geographically, the unlocated remains of the missing dead also remain categorically abstracted from death, creating uncertainties about how to move on or grieve such lives (see, e.g., Weiss-Krejci 2013). Little, however, has been said about bodies, the whereabouts of which are well-known, but that resist typical death care practices that re-spatialise the dead (both human and non-human), such as those in a submersible at the bottom of the ocean or frozen atop the world's tallest mountain peak.

The problem, we argue, is that studies of death (and the academic field of death studies) are often overwhelmingly focused on terrestrial sites and burial practices. These themes pervade the pages of the major journals that service the field – indeed, the very first special issue of prominent death studies journal *Mortality* addressed cemeteries and "their significance in both time and space" (Rugg 2003, 107) – and ground much of the current interest in 'deathscapes' and their constitution (Maddrell 2020).

However, recent scholarship is starting to undermine this terrestrial focus. From our perspective, the emergence of queer death studies challenges us to move beyond the norms that have traditionally grounded studies of death (Radomska et al. 2020). Applying queer theory to death provides a lens to view it and its place in the world sideways (Leckey, Brooks 2010). It is "relentlessly norm-critical" (Radomska et al. 2020, 82), with the verb-form 'queering' understood as a process of critical defamiliarization that may open other, more affirmative horizons (Radomska, Lykke 2022). With this in mind, the nascent field of queer death studies aims to advance conventional death studies in three key areas. First, through its emphasis on necropolitics and necropowers and their systematic workings to position particular bodies as left to die; second, by moving beyond the normative and exclusionary notions of the sovereign human subject (usually envisaged as white, able-bodied, cishet, and at least middle-class), and third, by engaging with the developing fields of posthumanities and environmental humanities and the ethico-political dimensions of more-than-human death these fields highlight (Radomska et al. 2020). Hence, we notice a tidal shift of interests swirling around water and death, including "posthuman mourning" (Lykke 2019) and "worlding waters" (Fredengren 2022).

If we look to the more-than-human influence on queer death studies, we also identify efforts to destabilize the fixity of earth-centric analyses. Rather than seeing soil as something fixed and static, new materialist engagements within ecocritical scholarship have helpfully moved towards a conceptualisation of ecologies in terms of 'place' as well as, increasingly, 'process'. In her essay "Dirt Theory and Material Ecocriticism", Heather Sullivan argues that despite the appearance of soil as grounded or stuck in place, "the small-scale earth-forms of dirt, dust, and sand are highly mobile aspects of our material surroundings" (2012, 516). Instead of "concentrating solely on 'place'", Sullivan writes, "dirt theory acknowledges ongoing processes through time and across space" (516). As an example of "prismatic" ecology (Cohen 2014) that moves beyond "green" ecocriticism, developments such as these signal a shift towards an all-encompassing view of the environment as a site of fluid mobilities and multispecies assemblages. However, what is often not emphasized is that mobilities, especially that of earth, rock, and sand, depend upon

cross-elemental and multispecies relations that facilitate their movement. Water, for instance, is a major agent in transporting other materials through suspension and dissolution. In this way, we note that attempts to destabilize the fixity of earth still utilize earth as the grounds upon which they build their foundations.

To further develop a blue death studies approach that draws on queer death studies and more-than-human influences, we turn to blue humanities scholarship, with its focus on watery geographies and ecologies. As an explicit act of resistance to the geological turn, stories of the ocean work by estranging familiar stories and narratives of humanity and nature, tapping into the "alienating pressure of the deep ocean", which in turn "removes human actors from controlling heights and plunges them into uncertainty, movement, and dissolution" (Mentz 2018). From Stacy Alaimo's material-feminist analysis of ocean acidification (2016) to Ian Buchanan's description of the blue humanities as a "movement in literary and cultural texts" that "re-establish[es] a kind of poetics of the ocean" (2018), the blue humanities has brought a narratological focus to ocean studies that accounts for the rapidity and global magnitude of Anthropogenic change. Aesthetic representations of the hyper-optical 'Blue Planet' have likewise opened ways of viewing oceanic space in terms of its scale, temporality, materiality, and its multiplicity of mediations, as evidenced by the connections between blue humanities and science studies (Opperman 2019). Further scholarship on other beings – such as, but not limited to, water-borne bacteria (Bear 2015), seaweed (Åsberg 2020), or whales (Ojrzyńska 2021) – highlight the deep connections that tie humans to the lives and destinies of sea dwelling organisms. These interventions in the blue humanities harbour potential to decentre human narratives and have critically extended the humanities into the territory of the posthuman, the inhuman, and the more-than-human.

More specifically, within blue humanities scholarship the water-corpse interface has already begun to rise to the surface. There has been a focused attention on the meaning of the corpse in the context of histories of the Middle Passage and the transatlantic slave trade, along with the rising cases of recent migrant drownings amidst escalating refugee crises. Christina Sharpe's compelling analysis of "wake work" (2016) and Alexis Pauline Gumbs's poetic renderings of "undrowned" crossings and marine kin (2020) offer reflections on water necropolitics that expose the extent to which water encapsulates political (in)action that causes death but also echoes through the afterlives of the corpse in its watery resting places. In Edouard Glissant's *Poetics of Relation* (1997), for instance, water is understood as both a kind of womb and an abyss. Drawing on Glissant, Elizabeth DeLoughrey's analysis of the co-authored novella *The Deep* treats this transoceanic abyss as the holding zone and a "multi-relative"

(to use a term of Sisseton Wahpeton Oyate scholar Kim TallBear's, quoted in DeLoughrey 2023, 353) archive for those thrown mercilessly overboard from slave ships to become carrion for the sharks that trailed behind (2023, 352). Texts like these represent queer formations around death that are sharply juxtaposed to what DeLoughrey elsewhere has theorised as *aqua homo*, the "unmarked masculinity" that has shaped the ocean into "a historical space of transnational capital, empire, and slavery" (2017). In the watery abyss, there are possibilities for queering forms of relation across the species divide and the life-death distinction. What these treatments of death in blue humanities scholarship so far indicate is an awareness of the embeddedness of watery ecologies in necropolitical systems shaped by colonial trade, oceanic exploration, and undersea extraction.

Evidently, there is already overlapping space between the fields of blue humanities, more-than-human scholarship, and queer death studies in their consideration of non-normative approaches to death. We further interrogate and extend this space of overlap as the basis for theorising BDS. Here, we note that an analysis at the intersection of blue humanities and queer death studies is particularly significant given the ubiquity of water. Indeed, roughly 71% of the earth's surface is covered in water. Additionally, water vapor floats in the atmosphere, circumnavigating the globe while groundwater also percolates below the surface, forming underground rivers, lakes, and pools. Water is understood as necessary for life and – as primordial soup – has been at the centre of debates about life's origins (do Nascimento Vieira et al. 2020). Moreover, the cellular makeup of all living bodies is impregnated with water; without it, humans die in approximately three days.

However water is also a corrosive agent that can wear away at the body. As literary scholar Edwige Tamalet Talbayev writes, seawater is a space of "borderization" and increased surveillance in a time of migration (2024, 23), but it is also a "viscous, form-altering substance" that can "distil lethality, physical disintegration" (2021, 213). In a moving assessment of Youseff Amine Elalamy's novella *Sea-Drinkers* (a narrative that explores the untimely drownings of Moroccan emigrants who are attempting illegal passage from Morocco to Spain), Talbayev contends that the decomposing bodies of the drowned migrants

> speak to the dissolution of bodily matter into the sea, its inescapable absorption into the brewing water compound: organic molecules scattered across the ocean by the ever forming currents of the sea, turning alluvium, fertile sediment, feeding the deep-time memorialization of the tragic loss of life under biopolitical violence. (Talbayev 2021, 214)

Water encompasses the body itself but is also an agent of its unravelling. At the same time, water is a vehicle for zoonotic disease transmission, inhaled by its host through respired droplets as in the case of life-threatening contagions like COVID-19. Even water itself can be viewed as living or dead (see, e.g., Peterson 2024). In other words, water is fundamental for understanding water necropolitics and ecologies; hence, approaching death through a 'watery' lens has potential for expanding, subverting, and mixing these manifold meanings.

Our synopsis follows the pull of scholarly currents intersecting blue humanities, queer death studies and the more-than-human. BDS thus understands death as a corporeal and cross-elemental condition that is invariably characterised by the mobility, flux, and multi-scalarity of water (and other substances). Hence, we can analyse the relationship between the places and processes of death through these three characteristics. First, we underscore the mobile capacities of water to re-spatialise deathly matter through flow, infiltration, permeation, evaporation, or freezing, while simultaneously stressing the specific water qualities and properties that differentiate waters and inform our recognition that water must always be understood as a waterbody (Peterson 2020). Second, following Tim Ingold and Cristián Simonetti's inquiry into 'solid fluids' – of which we take the paradigmatic example to be water – BDS is interested in the ways in which matter "exists in a continuous flux" (Ingold, Simonetti 2022, 3) on the solid-fluid continuum, but is made intelligible through their duration as "forms [that] last long enough to be recognizable" (10). In doing so, BDS walks with the staccato interruptions and long-flowing durations of and in time that solid fluids represent. Finally, BDS instils a multi-scalarity that recognises both individual and collective death in a more-than-human framework, drawing from what literary ecocritic Louise Squire describes as "death-facing ecology" (2020). Death-facing ecology is a move towards an acceptance of death that is "a grounded engagement with the loss of nature, one that recognises the implications of this loss for all life on Earth, humans included, and one that takes action to address this loss" (15). This acceptance of death at multiple scales, from the personal to the planetary (Olson 2024), allows us to understand and co-produce different forms of memory making, cultures, processes of grief, and levels of biodiversity loss. More generally, mobility and changing states of water require us to move away from thinking of death as a form of grounded permanence – codified in fixed coordinates, burial plots, or bounded identities – and instead hint at significant implications for ways of dealing with loss in novel ways.

The position we take in theorising BDS, then, is to think through but also beyond watery spaces and introduce a broader material-discursive understanding of water (but also other substances) in its various states and its site-specific instantiations with the hope that

such awareness will expand the borders of death care to include human and nonhuman animals and the environment itself. To facilitate a glimpse into how a BDS lens might be applied, therefore, we turn to the issue of ir/retrievability of the non/human corpse in the following two sections. The case studies we choose are linked through challenges that occur when death and water are brought together. To structure our analysis, we attend to water in two of its three states, as liquid and as solid. By focusing on liquid and frozen deaths, we point to how these different states of water invoke alternative manifestations of ir/retrievability, which provoke alternative considerations for the dead, their environs, and those who care for them.

3 Liquid Deaths

1.1 Submersible Bodies

In its liquid state, water settles and runs into the valleys, bowls, and crevices of the earth. Forming a variety of waterbodies, such as lakes, seas, and oceans, the spread and voluminous aspect of these places poses a fundamental barrier for the living to reconnect with the dead residing within their depths. More specifically, the vastness of the sea's watery depths constitutes swathes of (mostly) inaccessible spaces where countless bodies (human and otherwise) settle, drift, and decompose.

Many bodies are given over to water in peace and celebration. Burial at sea is permissible by law in various nations, performed by navies, and, in some places, may be subsidised (Asser Institute 2013). Those who give themselves to the sea follow different rationales. Some argue that having coordinates where someone was 'buried' makes more sense than owning/leasing a cemetery plot. Others give environmental reasons for being buried at sea, including not emitting CO_2 from cremation, assuming the sturdy, weighted-down caskets will become habitat for marine life, or expressing desire to "[become] a drop of rain one day […] in the ocean […] on the mountaintop" (Netburn 2022). Ultimately, for the families of many of those intentionally buried at sea (or scattered at sea, in the case of cremated remains), the sea itself becomes the grave marker – the body may be physically irretrievable, but the deceased is retrievable in the abstract by way of water (see, e.g., Høeg 2023).

Lakes, rivers, swamps, and seas also claim the lives of those not yet dead. From rip currents to tsunamis, to swells and mountainous waves, water has taken the lives of swimmers, seafarers, slaves, and soldiers. These bodies are no match for water's capacity for erasure – where erasure signifies not only disappearance, but the

inability to mark the site of that disappearance (Harrison 2003, 12). The main difference between the deaths of those underwater, however, amounts to the significance of their drowning. For many individuals, especially the poor and disenfranchised, their deaths have largely been ignored or unrecorded. Nearly two million enslaved Africans died while traveling the Middle Passage, the histories of some remembered only in more recent times (see Smith 2015) However, the majority are consigned to the deep, figuratively stored in Davy Jones' locker for safekeeping until the memories of their lives can be recovered. In many ways, those conscripted to the depths both in memory and in the sea are a result of social inequalities played out in the geopolitical realm. We mentioned earlier that in the cases of migrants and asylum seekers attempting to cross the Mediterranean, their journeys are partly manufactured through the securitisation of their activities by nation states within the EU (Pugh 2004; Vives 2017). Underwater realms offer an opportunity for the powerful to submerge and forget unpleasantries, as both pollution and the bodies of the 'undesirable' attest.

Nonetheless, how waters pose a barrier to the retrievability of human bodies is also conspicuous in the lives of those remembered. These tend to be high profile disasters, such as large shipwrecks, or 'tragedies' that become part of the public imaginary of the deep. In 2023, the submersible Titan and its five occupants were lost to the sea (both figuratively and literally) on an expedition to the Titanic, one of the deadliest shipwrecks in human history with an estimated death toll of 1,500 persons. Purportedly, the dive was initiated to attract attention to the activities of the operating company, OceanGate, and fund its activities – including finding and then exploiting undersea resources (e.g. rare minerals, fossil fuels, gemstones) as well as scientific exploration and disaster response – through deep sea tourism (tickets cost US $125,000) (Perrottet 2019). Nonetheless, the CEO of OceanGate, Stockton Rush, admitted that the impetus for building submersibles was partially to fulfil his desire to be "nice and cozy, and having a hot chocolate with you" instead of "freezing and going through a two-hour decompression hanging in deep water" during cold water dives (2019). In other words, the death of those on the Titan was predicated upon turning the death of others into a leisurely (more or less) underwater spectacle as much as it was an idiosyncratic preference to inhabit underwater space at a standard typical for humans with more financial resources. Parallels with DeLoughrey's aqua homo are inescapable.

Of course, the Titan is just one diving journey that went horribly wrong. Today, companies that specialise in submersibles still operate and both depend upon and target wealthy patrons to fund their work (Halff 2024). That the tragedy of the Titan did not quell but rather spurred parallel activities is telling. This quest for manned

deep-sea submersibles displays a fetish towards making certain lives and stories retrievable, in spaces where humans ought not to survive. Underwater spaces no longer represent barriers to human life but promise to envelope it in a liquid layer, offering, in the words of Rush, "a very protected environment" available to humanity if dry land ever becomes uninhabitable (Perrottet 2019). In this imaginary, the oceans and seas no longer constitute an inaccessible cemetery for those drowned. Instead, they represent spaces for the living, whereby the cables that supply electricity and air to the deep become lifelines for humans that seek to traverse and ultimately occupy underwater realms and other spaces previously understood as deathly.

1.2 Aqueous Bodies

Liquid water also intersects with the dead through death care practices that intentionally convert the deceased into aqueous bodies. 'Cremation' by water, best known as alkaline hydrolysis, has a long history, having first been practiced on farm animals to produce gelatine, glue, and fertiliser and then later as a quicker, more efficient disposal mechanism for laboratory animals and pets (Kaye et al. 1998; Oster 2022). A process that occurs in the digestive track of animals and moist soil, alkaline hydrolysis has been developed by industry to speed up and break down any proteins, DNA, RNA, fat, cells, prions, pathogens, viruses, chemotherapy drugs, embalming fluids, and bacteria into their component chemicals (Arnold et al. 2024). The process involves submerging a corpse in a solution consisting of 95% water and 5% of an alkaline substance, typically sodium hydroxide (aka lye/caustic soda) or potassium hydroxide (aka lye/caustic potash). The corpse and solution are then heated to approximately 1,500° C, pressurised, and (sometimes) agitated, which dissolves the flesh and forms a 'sterile effluent' while leaving the body's bones behind. The effluent itself is a hydrolysate (a generic term which describes any substance whose chemical bonds get broken apart by water), which contains amino acids, peptides, sugars, salts, and fatty acids. To make the pH level of the effluent more neutral, sulphuric acid gets added to the mixture, where it then can be disposed of in modern sewer systems as a 'benign' liquid.

Importantly, this process hinges on controlling temperature, time, and the movement of the solution and corpse within the retort (the device in which the deceased are liquified). These processes, albeit unique to alkaline hydrolysis, typically are treated as similar or dissimilar to cremation, what death studies scholar Philip R. Olson refers to as "assimilationist" and "separatist" perspectives (2014). The messaging, however, is clearly separatist in nature, emphasising that alkaline hydrolysis is natural and not violent like burning bodies. The UK's Resomation Ltd., for example:

> position their products in an environmental narrative and appeal to a widespread desire and consumer sensibility to be environmentally responsible. (Arnold et al. 2024, 450)

Nonetheless, the alkaline hydroxides used in alkaline hydrolysis likely originate from industrial production of these compounds using electrolysis on sodium/potassium chlorides through an energy intensive chloralkali process. The source and production of these substances therefore complicate the 'naturalness' of the solutions at use in alkaline hydrolysis. Heating and circulating the solution as well as pressurising and agitating the retort also offer a sense of natural processes sped up, albeit in a high-tech fashion or in a more "aesthetic and emotionally 'gentle'" manner (Arnold et al. 2024, 450). This speeding up of decomposition, of separating flesh from bone and dissolving it into liquid, serves to readily retrieve the bones of a corpse but conversely is intended to do away with the body, turning it into something to be dispersed rather than disposed (Rumble et al. 2014), thereby rendering the dead as irretrievable.

After the bones are removed from the effluent, this liquid has potential for significant symbolic meaning. Typically, the effluent gets stuck between the idea of it carrying the deceased's soul or identity and the more chemical understanding of the liquid as 'sterile'. Hence, alkaline hydrolysis has encountered resistance regarding pouring humans 'down the drain' (see, e.g., Powell 2017) as well as support from those who treat the effluent as "merely a solution of organic and inorganic chemicals from which all traces of humanity have been eliminated" (Scarre 2024). In this latter purview, by being poured down the drain, the effluent further intermixes with storm water, sewage, and other substances in the sewer system, becoming nothing that could be classified as human. The argument pivots on the need to differentiate the liquified substance from the person, reflecting concerns over mingling remains with taboo or impure substances (Olson 2024; Warren, Van Deest 2014). That said, other possible options exist for the effluent to take on other meanings, such as that of agricultural fertiliser (Rumble et al. 2014, 249). Here, the effluent can be ascribed a more life-giving potentiality, functioning similarly to the promises of bodies as compost (Krupar 2018). Nonetheless, the diffuse quality of water, its inability to stay put in any location for any length of time, defies both place and permanency. Hence, bodies that would become 'water' challenge overriding concerns related to "what [the corpse] is to be transformed into and where it is to be relocated" (Rumble et al. 2014, 251). In other words, to become water, in a modernist sense, cannot occur because water gets conceptualised as a pure (molecular) substance (Linton 2010) while its mutability offers a wide variety of interpretation and connection to identity, personhood, and more (see Bachelard 1983; Illich 1986).

4 Frozen Deaths

1.3 Stranded Bodies

In the previous section, we discussed how bodies become loosened from place (either through submersion or dissolution), becoming irretrievable. But what happens when a body, normally underwater and therefore a largely irretrievable scientific object, becomes retrievable by becoming materially out of place, inviting attention through the pungency of its decay? Stranded bodies, such as those of dead cetaceans, offer a way of thinking about aquatic death, post-mortem movements, and the afterlives of dead nonhuman animal tissues.

In early November 2010, for instance, one of the largest cetacean strandings in Irish history occurred on Rutland Island off the coast of County Donegal. In a somber scene, thirty-three long-finned pilot whales were stranded and washed ashore, their carcasses coming to rest along the sandy beach. The reason for this mass stranding event remains undetermined to this day, but speculations arose at the time about the use of sonar technologies wielded by a Royal navy vessel nearby in the Outer Hebrides (McCann 2010). According to the Irish Whale and Dolphin Group (2010), several stranded pilot whales were removed from the beach and transferred to a rendering facility. Before the carcasses were removed, however, several tissue samples were recovered from the bodies and immediately transferred to the Irish Cetacean Genetic Tissue Bank (ICGTB) at the Dublin Natural History Museum to be frozen for scientific research purposes.

This story, like other incidents of Unusual Mortality Events (UME), exemplifies how dead nonhuman animal bodies transform into what Sophia Nicolov describes as an "environmental tool of measurement" (2021, 72) and a "scientific object" (2021, 68). In her assessment of UMEs, Nicolov argues that stranded whale bodies become "evidence" through post-mortem analysis (2019, 21), revealing the health and state of marine environments particularly in relation to increasingly damaging anthropogenic activities like deep sea mining and resource extraction. These cryopreserved samples, which are held in 96% ethanol and frozen at –0.7°C at the ICGTB (Geraghty et al. 2022), represent an abstracted *ex-situ* afterlife of the stranded cetacean body; a spreading out of death that remediates aquatic life into a diminutive sample, staved off from decay, to lie suspended *multo tempore* in the banal blackness of an ordinary freezer.

The frozen sample, once thawed and subjected to study, becomes a liquid portal into the past lives and deaths of the stranded cetaceans, allowing scientific researchers to map gene flow but also to understand the effects of sea level rise, increasing sea surface temperatures, and anthropogenic effects on cetacean populations. In a

paper on the post-mortem analysis of frozen samples stored at the ICGTB, scientific researchers report that by using a "carcass drift prediction model", they can assess the time and presumed location of death based on "cetacean body parameters" such as "thickness and floatability" (Louis et al. 2014, 2). Reading back through the sample frozen in time and interpreting it through a "biopsy darting system" that maps the sites of strandings, other researchers have discovered that cetaceans that die at sea may not be precisely geographically pinpointed to where they lived due to effects of shifting water currents on the post-mortem body (Mirimin et al. 2011, 8). The mobility of water, both within the cetacean body but also surrounding it through its immersion in water, is furthered in the post-mortem process as the body becomes pulled along the currents, stranded, sampled, frozen, and thawed. While static and frozen in time, the samples reveal the potential of water to constitute a body, but also to trace its flow backwards in time, thereby making the death of sea creatures proximate and, to a certain degree, knowable.

Such strandings offer a rare opportunity for epistemological retrieval given that, like most aquatic species, cetacean lives and especially deaths are still largely unknown to humans (Alaimo 2011). This is despite increasing human-cetacean contact since the inception of the whaling industry and its presence in museological displays and sideshow exhibitions since the nineteenth century (Jones 2017). Studying the ocean is a scientific challenge but also poses a representational problem, Bogna Konior suggests, since the sea remains an inhospitable environment for humans and even for some remote technologies like undersea cameras (2019, 50). To "retrieve" in this sense is to see and by extension to gain knowledge not only *in spite of* the death of cetaceans but precisely *because* of it, through their surfacing and stranding. In all its vibrant odiferousness, a cetacean carcass brings with it the chance to "freeze" a stranding as a knowable moment in time.

As an example of retrievability, stranded bodies make visible the cross-elemental shifts of death and its post-mortem processes. These cross-elemental shifts are happening on the macro level of rising sea temperatures (an effect of human-driven climate change, which is in turn linked to an increase in cetacean strandings) as well as on a micro level through cryobiological sampling that turns liquid deaths into frozen afterlives. In theorising BDS, we are invested in death-facing ecologies (Squire 2020) that accept rather than deny human mortality and the potential of the human body to submerge or dissolve. Such death-facing ecology accounts for the fact that human activities have fatal effects on nonhuman life (especially in oceans, rivers, and lakes). Thrown upon the beach as material reminders of anthropogenic climate change and placed in labelled sample tubes in the freezer for scientific study, stranded cetacean

carcasses illuminate the mobility, flux, and multiscalarity of water and its connection to biodiversity change in the Anthropocene.

1.4 Exposed Bodies

As anthropogenic climate change warms the oceans, so too does it melt the glacial ice that covers 10% of the earth's surface. As the ice recedes, refreezes, and retreats again, the dead are disappeared and revealed in concert. Perhaps the most famous example of these frozen dead emerged from the ice in 1991. In September of that year, hikers in the Alps came across the preserved corpse of a man who had died over 5,000 years previously. Nicknamed Ötzi, the man lay surrounded by his possessions – a flint knife at his belt, a fur hat underneath the boulder on which the body lay, belt pouch, a quiver, arrows a bow, a copper axe, a backpack frame – all within meters of him and all frozen in time by, and still partially suspended in, the glacial ice (Pilø et al. 2023). On Mount Everest history repeats itself, with the frozen bodies of around two hundred people who died in their attempts to scale the mountain remaining on and in the ice. Just like Ötzi, the dead of Everest lie surrounded by their material belongings – their multi-coloured polyester mountaineering suits, their metal oxygen tanks, their cameras, tents, and guide ropes.

The ice froze and receded over Ötzi's body many times in the 5,000 years he lay in the Alpine gully (Pilø et al. 2023), each (un)freezing event becoming an alternative history of discovery or decomposition. In this way, Ötzi represents an icy paradox. If his body had not been preserved in ice, it would long ago have decomposed. Its preservation relied on the presence of ice, but this ice also concealed its existence and prohibited its retrieval for over 5,000 years. Likewise, the ice that freezes the bodies on Everest in their all-too recognisably human death poses can be the very thing that prevents their recovery. Those bodies that do make the journey home are painstakingly chipped from the ice and dragged down the mountain – often at a higher cost than that initially paid by the deceased to make the climb (Branch 2017).

Precisely because they cannot be retrieved from the mountain, some of Everest's frozen dead persist as permanent way markers to the summit, known affectionately by their posthumous nicknames – Green Boots, Sleeping Beauty. Others are pushed off the precipice in a sombre cliff burial, their bodies now hidden from view in the frigid crevasses below. Still others are shoved out of the way of oncoming climbers or collected alongside tonnes of trash in the Nepali army's ongoing attempts to clean up the mountain (Kuta 2024). Each of these actions reveal the material force of water expressed as ice. The frozen bodies atop Everest have moved through

a state of flux. As the water contained within each body has expanded and crystallized, the body has undergone a change in state and meaning from their previously fleshy, warm selves. The frozen corpse accrues new meaning in the form of object – way marker, obstacle, trash – rather than person.

The inherent liquidity of the human body also figures in the new death technology of cryopreservation, which seeks to suspend the bodies of the dead for potential resurrection at an unknown point in the future. For these bodies to be successfully suspended, they must be protected from their own corpulent moisture. After draining the blood, a cryoprotectant anti-freeze solution is perfused throughout the body to prevent the formation of ice crystals that will wreak cellular havoc. Following this perfusion, the body is placed in a dewar and suspended in liquid nitrogen at –196° C. While the cooling agent is not water, there are strong cross-elemental ties. Like water, liquid nitrogen can move across and between various states of being: solid, liquid, and gas. Though cryonicists are quick to reject the colloquial understanding of cryonic bodies as 'frozen', they acknowledge that the popular conception of cryopreservation is fundamentally linked with water and ice (O'Keefe 2022). The combination of anti-freeze and liquid nitrogen that promises the frozen dead a possible future thereby preserves the bodies by simultaneously suppressing the hydrological while relying on its symbolic evocations.

However this preservation also renders cryopreserved bodies irretrievable. These liquids put bodies in stasis outside of chronobiological norms. Cryopreserved bodies become irretrievable through their massive, ultra-material presence in stainless steel dewars. The liquid they are suspended in acts as a barrier, requiring ongoing maintenance by technicians with exclusive access. At the same time their inability to decompose removes the cryopreserved from the mortal condition shared by all living organisms and transforms them into something transhuman that nonetheless retains an intimate relation with more-than-human elements. This is liquid-facilitated irretrievability on multiple scales because they are placed outside the living memories of loved ones but also the biosphere. Across our discussions of Ötzi, Everest, and the cryopreserved, then, we demonstrate that water both as an internal and external force upon bodies plays temporal tricks. It preserves corpses and prevents decay. At the same time it endangers the reconstitution of some bodies, threatening to cause irreversible ruptures. It also removes the bodies encased in its frozen embrace from their own time and allows them to remain in stasis into an unknown future. The frozen dead interrupt the linear understanding of time in a powerful way. While inhabiting a fragile existence, they persevere in the face of all – in the face of time, and the memory of their loved ones.

5 Conclusion

In this paper we have sought to theorise BDS to erode the terrestrial bias that pervades much of the fields of death studies and the environmental humanities. Drawing on the first steps being taken towards the establishment of a queer death studies, as well as the more developed blue humanities, we have proposed what we take to be the core tenets of this new theoretical approach. A focus on the characteristics of mobility, flux, and multi-scalarity has allowed us to analyse how water shifts and subverts deathly concerns related to materiality, personhood/identity, symbol/meaning, memory and access.

We have applied a BDS lens to the specific question of ir/retrievability to illustrate the insights that this approach can generate. We have shown that the possibility of retrieval when water is involved is inherently linked to water states, temperature, time, and spatialities. Each fundamentally impacts the literal, physical retrievability of a non/human corpse, as well as retrievability in the abstract – the retrievability of *meaning*. Water is thus inherently capable of both "[bringing] meaning and matter together again" (Ingold, Simonetti 2022, 6), as well as rendering them permanently asunder.

This specific interrogation of the ir/retrievability of bodies at the water-corpse interface through the lens of BDS invites further, broader questions that can assist in developing this approach, including:

- Beyond the characteristics of mobility, flux, and scale, what else needs be mapped out for BDS?
- How do we connect ecologies with water necropolitics as part of BDS?
- Are there more appropriate ethical underpinnings for BDS other than death facing ecology?
- How might BDS further queer understandings of death?

Answering these questions and others can further develop this approach. We anticipate and hope to instil further work in this important, but overlooked, area.

Bibliography

Alaimo, S. (2011). "New Materialisms, Old Humanisms, or, Following the Submersible". *NORA: Nordic Journal of Feminist and Gender Research*, 19(4), 280-4. http://dx.doi.org/10.1080/08038740.2011.618812

Alaimo, S. (2016). *Exposed: Environmental Politics and Pleasures in Posthuman Times*. Minneapolis: University of Minnesota Press. http://dx.doi.org/10.5749/minnesota/9780816621958.001.0001

Arnold, M. et al. (2024). "Representing Alkaline Hydrolysis: A Material-Semiotic Analysis of an Alternative to Burial and Cremation". *Mortality*, 29(3), 447-65. http://dx.doi.org/10.1080/13576275.2023.2174838

Asser Institute (2013). *Legal Aspects of Sea Burial*. https://www.thanos.org/uploads/documents/seaburial-fiat-ifta-march-2013-advice-1.pdf

Åsberg, C. (2020). "A Sea Change in the Environmental Humanities". *Ecocene: Cappadocia Journal of Environmental Humanities*, 1(1), 108-22. http://dx.doi.org/10.46863/ecocene.41

Bachelard, G. (1983). *Water and Dreams: An Essay on the Imagination of Matter*. Transl. by E.R. Farrell. Dallas: The Pegasus Foundation.

Bear, C. (2015). "Tracing Bacterial Legalities: The Fluid Ecologies of the European Union's Bathing Water Directive". Braverman, I. (ed.), *Animals, Biopolitics, Law: Lively Legalities*. New York: Routledge, 79-98.

Bezan, S.; McKay, R. (2022). "Animal Remains: An Introduction". Bezan, S.; McKay, R. (eds), *Animal Remains*. London: Routledge, 1-11. http://dx.doi.org/10.4324/9781003129806-1

Branch, J. (2017). "Deliverance from 27,000 Feet". *The New York Times*, December 19. https://www.nytimes.com/interactive/2017/12/18/sports/everest-deaths.html

Buchanan, I. (2018). s.v. "Blue Humanities". *Oxford Dictionary of Critical Theory*. 2nd ed.

Cohen, J.J. (2014). *Prismatic Ecology: Ecotheory Beyond Green*. Minneapolis: University of Minnesota Press.

DeLoughrey, E. (2017). "Submarine Futures of the Anthropocene". *Comparative Literature*, 69(1), 32-44. http://dx.doi.org/10.1215/00104124-3794589

DeLoughrey, E. (2023). "Kinship in the Abyss: Submerging with *The Deep*". *Atlantic Studies*, 20(2), 348-60. https://doi.org/10.1080/14788810.2022.2080462

do Nascimento Vieira, A. et al. (2020). "The Ambivalent Role of Water at the Origins of Life". *FEBS Letters*, 594(17), 2717-33. http://dx.doi.org/10.1002/1873-3468.13815

Fredengren, C. (2022). "Worlding Waters with the Dead". *Norwegian Archaeological Review*, 55(2), 140-58. http://dx.doi.org/10.1080/00293652.2022.2073910

Geraghty, A.C.; Viscardi, P.; Monaghan, N.T. (2022). "The Irish Cetacean Genetic Tissue Bank". *Irish Naturalists' Journal*, 39, 119-21.

Glissant, É. (1997). *Poetics of Relation*. Ann Arbor: University of Michigan Press.

Gumbs, A.P. (2020). *Undrowned: Black Feminist Lessons from Marine Animals*. Chico: AK Press.

Halff, N. (2024). "Titan OceanGate Disaster: America's Super-Wealthy Are Still Risking Their Lives on Deep Sea Adventures Despite Tragedy that Shocked the World". *Daily Mail*. https://www.dailymail.co.uk/news/article-13464111/deep-sea-adventures-Titan-submarine-disaster-oceangate.html

Harrison, R.P. (2003). *The Dominion of the Dead*. Chicago: University of Chicago Press.

Høeg, I.M. (2023). "Solid and Floating Burial Places. Ash Disposal and the Constituting of Spaces of Disposal". *Mortality*, 28(1), 1-20. http://dx.doi.org/10.1080/13576275.2020.1869707

Illich, I. (1986). *H2O and the Waters of Forgetfulness*. New York: Marion Boyars.

Ingold, T.; Simonetti, C. (2022). "Introducing Solid Fluids". *Theory, Culture & Society*, 39(2), 3-29.

Irish Whale and Dolphin Group (2010). *Mass Stranding of Donegal Pilot Whales*. https://iwdg.ie/mass-stranding-of-donegal-pilot-whales-updated/

Jones, J.L. (2017). "Fish Out of Water: The "Prince of Whales" Sideshow and the Environmental Humanities". *Configurations: Journal of Literature, Science, and the Arts*, 25(2), 189-214. http://dx.doi.org/10.1353/con.2017.0012

Kaye, G.I. et al. (1998). "Efficacy of Alkaline Hydrolysis as an Alternative Method for Treatment and Disposal of Infectious Animal Waste". *Journal of the American Association for Laboratory Animal Science*, 37(3), 43-6.

Konior, B.M. (2019). "Climate Change Goes Live, or Capturing Life? For a Blue Media Studies". *Symplokē*, 27(1-2), 47-63. https://doi.org/10.5250/symploke.27.1-2.0047

Krupar, S.R. (2018). "Green Death: Sustainability and the Administration of the Dead". *Cultural Geographies*, 25(2), 267-84. http://dx.doi.org/10.1177/1474474017732977

Kuta, S. (2024). "The Nepali Army is Removing Trash and Bodies from Mount Everest". *Smithsonian Magazine*. https://www.smithsonianmag.com/smart-news/the-nepali-army-is-removing-trash-and-bodies-from-mount-everest-ahead-of-this-years-mountaineering-season-180984162/

Leckey, R.; Brooks, K. (2010). "Introduction". Leckey, R.; Brooks, K. (eds), *Queer Theory: Law, Culture, Empire*. Abingdon: Routledge, 1-19. http://dx.doi.org/10.4324/9780203856116

Linton, J. (2010). *What Is Water? The History of a Modern Abstraction*. Vancouver: UBC Press.

Louis, M. et al. (2014). "Ecological Opportunities and Specializations Shaped Genetic Divergence in a Highly Mobile Marine Top Predator". *Proceedings of the Royal Society B*, 281(1795), 20141558. https://doi.org/10.1098/rspb.2014.1558

Lykke, N. (2019). "Co-Becoming with Diatoms: Between Posthuman Mourning and Wonder in Algae Research". *Catalyst. Feminism, Theory, Technoscience*, 5(2). http://dx.doi.org/10.28968/cftt.v5i2.31922

McCann, N. (2010). "Whales Found Dead on Donegal Beach". *BBC News*, November 7. https://www.bbc.com/news/uk-northern-ireland-11705622

Maddrell, A. (2020). "Deathscapes". Kobayashi, A. (ed.), *International Encyclopedia of Human Geography*. 2nd ed. Amsterdam: Elsevier, 167-72.

Mentz, S. (2018). "Blue Humanities". Braidotti, R.; Hlavajova, M. (eds), *Posthuman Glossary*. London: Bloomsbury, 69-71.

Mirimin, L. et al. (2011). "Fine-Scale Population Genetic Structuring of Bottlenose Dolphins in Irish Coastal Waters". *Animal Conservation*, 14(4), 342-53. http://dx.doi.org/10.1111/j.1469-1795.2010.00432.x

Netburn, D. (2022). "Yes, Anybody Can Be Buried at Sea. Why People Pick the Ocean as Their Final Resting Place". *LATimes*, April 12. https://www.latimes.com/california/story/2022-04-12/full-body-burials-at-sea-ocean-funeral

Nicolov, S. (2021). *Open Endings: Recent Gray Whale Strandings and their Cultural Representations in the Pacific Northwest* [PhD Dissertation]. Leeds: University of Leeds.

Nicolov, S.M.A. (2019). "Open Endings: The Eastern North Pacific Gray Whale Unusual Mortality Event, 1999-2000". *Symplokē*, 27(1-2), 15-33. https://doi.org/10.5250/symploke.27.1-2.0015

O'Keefe, J. (2022). *Why is Cryopreservation at -196 Degrees Celsius?* https://www.tomorrow.bio/post/why-is-cryopreservation-at-minus-196-degrees-celsius-2022-11-04

Ojrzyńska, K. (2021). "Whales, Water, and Disability. Towards a Blue Cultural Disability Studies". *Przegląd Kulturoznawczy*, 48(2), 268-83. http://dx.doi.org/10.4467/20843860pk.21.019.14076

Olson, P.R. (2014). "Flush and Bone: Funeralizing Alkaline Hydrolysis in the United States". *Science, Technology, & Human Values*, 39(5), 666-93. https://doi.org/10.1177/0162243914530475

Olson, P.R. (2024). "Death at a Planetary Scale: Mortality's Moral Materiality in the Context of the Anthropocene". Peterson, J.D.; Olson, P.; Dekker, N.L. (eds), *Death's Social and Material Meaning Beyond the Human*. Bristol: Bristol University Press, 168-79. https://doi.org/10.56687/9781529230161-008

Opperman, S. (2019). "Storied Seas and Living Metaphors in the Blue Humanities". *Configurations: Journal of Literature, Science and Technology*, 27(4), 443-61. https://doi.org/10.1353/con.2019.0030

Oster, L. (2022). "Could Water Cremation Become the New American Way of Death?". *Smithsonian Magazine*, July 27. https://www.smithsonianmag.com/innovation/could-water-cremation-become-the-new-american-way-of-death-180980479/

Perrottet, T. (2019). "A Deep Dive Into the Plans to Take Tourists to the 'Titanic'". *Smithsonian Magazine*. https://www.smithsonianmag.com/innovation/worlds-first-deep-diving-submarine-plans-tourists-see-titanic-180972179/

Peterson, J. (2020). *Excessive Seas: Waste Ecologies of Eutrophication* [PhD Dissertation]. Stockholm: KTH Royal Institute of Technology.

Peterson, J. (2024). "Can the Baltic Sea Die? An Environmental Imaginary of a Dying Sea". Peterson, J.D.; Olson, P.; Dekker, N.L. (eds), *Death's Social and Material Meaning Beyond the Human*. Bristol: Bristol University Press, 54-67.

Pilø, L. et al. (2023). "Ötzi, 30 Years On: A Reappraisal of the Depositional and Post-Depositional History of the Find". *The Holocene*, 33(1), 112-25. http://dx.doi.org/10.1177/09596836221126133

Powell, D. (2017). "Dissolve the Dead? Controversy Swirls Around Liquid Cremation". *Scientific American*, September 7. https://www.scientificamerican.com/article/dissolve-the-dead-controversy-swirls-around-liquid-cremation/

Pugh, M. (2004). "Drowning not Waving: Boat People and Humanitarianism at Sea". *Journal of Refugee Studies*, 17(1), 50-69. https://doi.org/10.1093/jrs/17.1.50

Radomska, M.; Mehrabi, T.; Lykke, N. (2020). "Queer Death Studies: Death, Dying and Mourning from a Queerfeminist Perspective". *Australian Feminist Studies*, 35(104), 81-100. https://doi.org/10.1080/08164649.2020.1811952

Radomska, M.; Lykke, N. (2022). "Queer Death Studies". Braidotti, R.; Jones, E.; Klumbyte, G. (eds), *More Posthuman Glossary*. London: Bloomsbury, 124-5.

Rugg, J. (2003). "Introduction: Cemeteries". *Mortality*, 8(2), 107-12.

Rumble, H. et al. (2014). "Disposal or Dispersal? Environmentalism and Final Treatment of the British Dead". *Mortality*, 19(3), 243-60.
https://doi.org/10.1080/13576275.2014.920315

Scarre, G. (2024). "Alkaline Hydrolysis and Respect for the Dead: An Ethical Critique". *Mortality*.
https://doi.org/10.1080/13576275.2024.2338284

Sharpe, C. (2016). *In the Wake: On Blackness and Being*. Durham: Duke University Press.

Smith, D. (2015). "South Africa Beach Service to Honour Slaves Drowned in 1794 Shipwreck". *The Guardian*, June 1st.
https://www.theguardian.com/world/2015/jun/01/cape-town-beach-service-honour-african-slaves-drowned-1794-shipwreck

Squire, L. (2020). *Death-Facing Ecology in Contemporary British and North American Environmental Crisis Fiction*. London: Routledge.

Sullivan, H. (2012). "Dirt Theory and Material Ecocriticism". *Interdisciplinary Studies in Literature and Environment*, 19(3), 515-31.
http://dx.doi.org/10.1093/isle/iss067

Talbayev, E.T. (2021). "Seawater". *Contemporary French and Francophone Studies*, 25(2), 207-17.

Talbayev, E.T. (2024). "The Residual Migrant: Water Necropolitics and Borderization". *Interventions*, 26(1), 21-35.
http://dx.doi.org/10.1080/1369801X.2023.2190921

Vives, L. (2017). "Unwanted Sea Migrants Across the EU Border: The Canary Islands". *Political Geography*, 61, 181-92.
https://doi.org/10.1177/13684310241270435

Warren, M.W.; Van Deest, T.L. (2014). "Human Cremation: Commingling and Questioned Identity". Adams, B.J.; Byrd, J.E. (eds), *Commingled Human Remains*. Amsterdam: Academic Press, 239-55.

Weiss-Krejci, E. (2013). "The Unburied Dead". Nilsson Stutz, L.; Tarlow, S. (eds), *The Oxford Handbook of the Archaeology of Death and Burial*. Oxford: Oxford University Press, 281-301.