

mussel
memory:
getting to
know a
community of
freshwater
pearl mussels

aoife
o'leary

mcneice



OLLSCOIL NA GAILLIMHE
UNIVERSITY OF GALWAY



Taighde Éireann
Research Ireland



In those deep waters the pearl-

Freshwater pearl mussels live longer than any other animal in Ireland. They live and reproduce well into their 100s.

Human states and institutions create policies on how to engage with the pearl mussel, but these policies are based on values that seem fleeting alongside the lifespan of a mussel. Over the course of a single lifetime, mussels living in rivers today have gone from a thriving, largely overlooked, commonplace species in the early twentieth century to a critically engendered one, subject to various conservation schemes.

The mussel's life pattern invites us to think collectively. Mussels are dependent on other river dwellers to survive. Adult mussels release their eggs into the flowing waters rivers and passing salmonid fish - salmon or trout - inhale these eggs into their gills. After growing to roughly six times original length, young mussels detach from the fish and burrow into riverbed.

The community of mussels I am getting to know live in the river Lee in County Cork, Ireland.

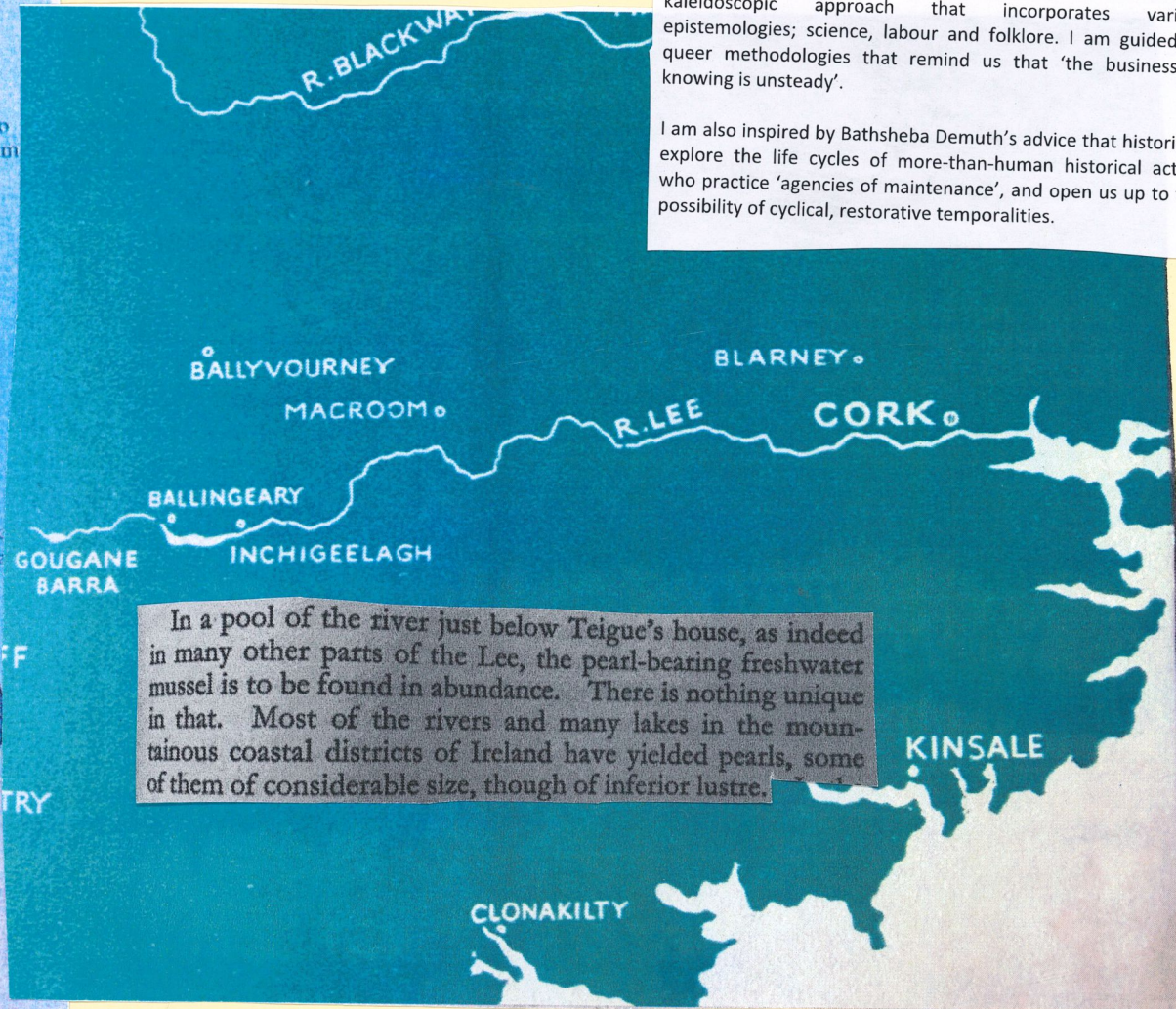
mussel is occasionally found. This

In this zine, I introduce their home and the different approaches I have taken to get to know them. I have tried to take a kaleidoscopic approach that incorporates various epistemologies; science, labour and folklore. I am guided by queer methodologies that remind us that 'the business of knowing is unsteady'.

I am also inspired by Bathsheba Demuth's advice that historians explore the life cycles of more-than-human historical actors who practice 'agencies of maintenance', and open us up to the possibility of cyclical, restorative temporalities.

species of *Mytilus* exists in most of the

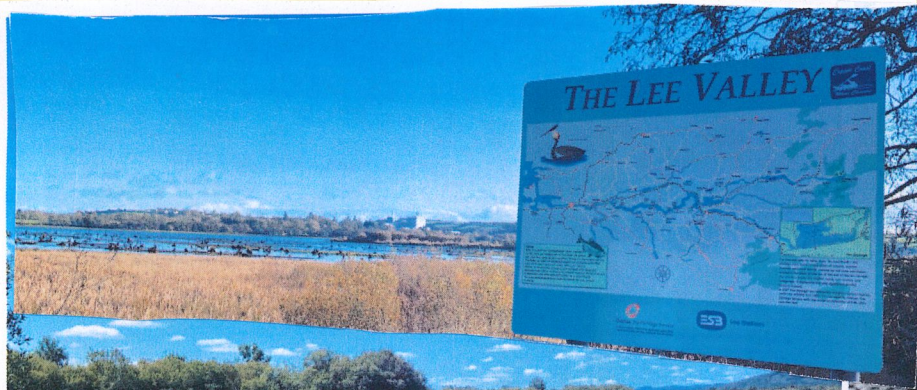
from the very source downward.



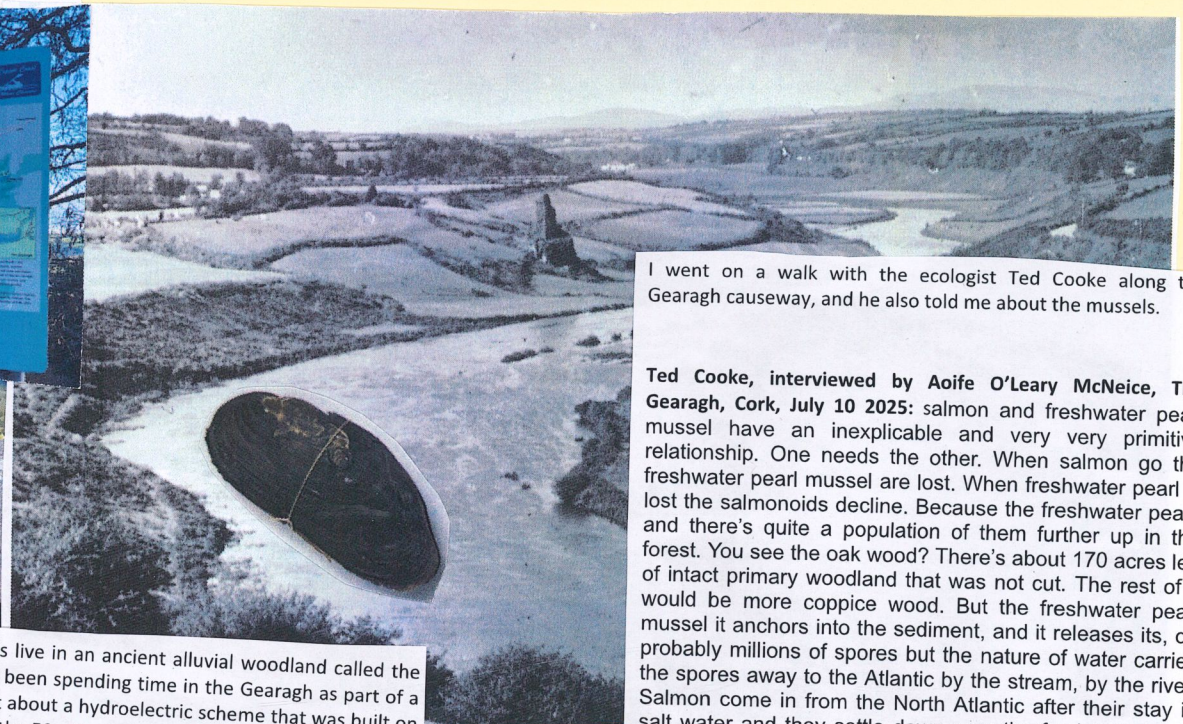
In a pool of the river just below Teigue's house, as indeed in many other parts of the Lee, the pearl-bearing freshwater mussel is to be found in abundance. There is nothing unique in that. Most of the rivers and many lakes in the mountainous coastal districts of Ireland have yielded pearls, some of them of considerable size, though of inferior lustre.

the Lee has been discovered in all parts,

of the county of Cork, and in



The mussels living in the Lee today were living when the valley was transformed by the dams. They lay submerged while trees were being felled around them by ESB workers, and surveyed and photographed by the ecologist Helen O'Reilly. They have not reproduced since the development of the schemes due to the blocking of the salmon from their spawning grounds in the Gearagh. The youngest Ted has encountered are 70 years old.



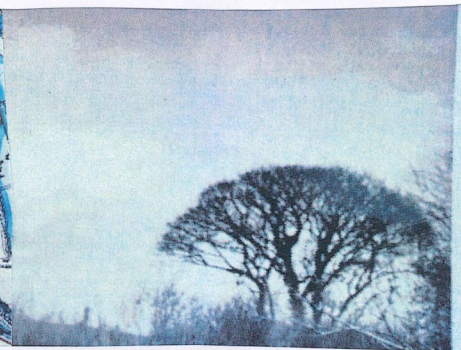
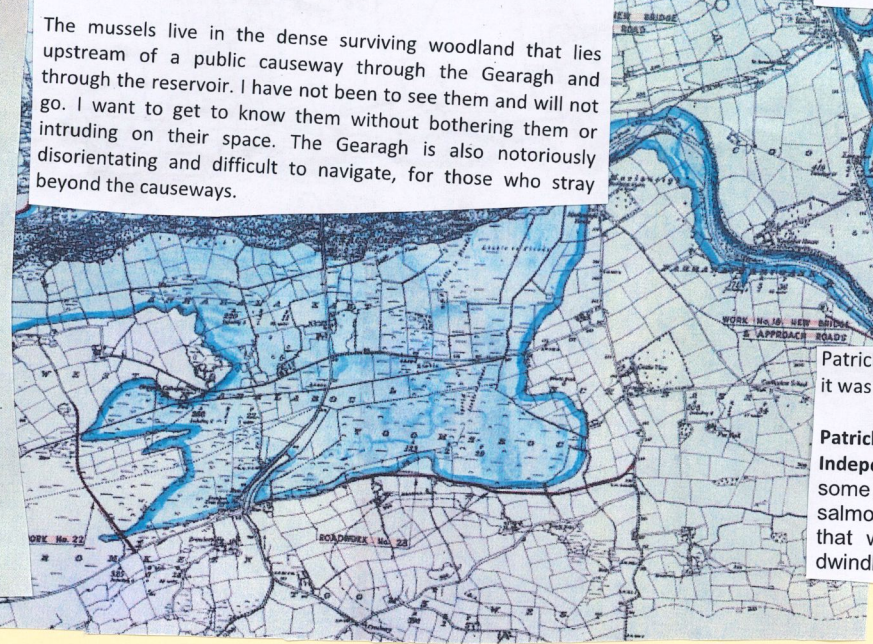
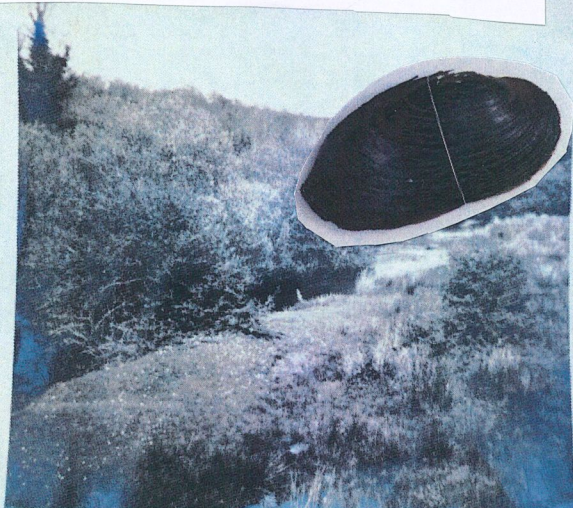
I went on a walk with the ecologist Ted Cooke along the Gearagh causeway, and he also told me about the mussels.

Ted Cooke, interviewed by Aoife O'Leary McNeice, The Gearagh, Cork, July 10 2025: salmon and freshwater pearl mussel have an inexplicable and very very primitive relationship. One needs the other. When salmon go the freshwater pearl mussel are lost. When freshwater pearl is lost the salmonoids decline. Because the freshwater pearl, and there's quite a population of them further up in the forest. You see the oak wood? There's about 170 acres left of intact primary woodland that was not cut. The rest of it would be more coppice wood. But the freshwater pearl mussel it anchors into the sediment, and it releases its, oh probably millions of spores but the nature of water carries the spores away to the Atlantic by the stream, by the river. Salmon come in from the North Atlantic after their stay in salt water and they settle down over the freshwater pearl mussels, and the freshwater pearl mussels pump the fertilised spores up into the gills and the salmon closes the gills and swims up river and reseeds or replants into the sediment upstream. It's the only way the freshwater pearl mussel has evolved to survive.

The Lee Mussels live in an ancient alluvial woodland called the Gearagh. I have been spending time in the Gearagh as part of a research project about a hydroelectric scheme that was built on the River Lee in the 50s. As part of the scheme a large portion of the woodland was removed and is now a shallow reservoir.

I knew that the dams prevented salmon from returning to their spawning grounds in the Gearagh, but I did not know about the mussels until I did some oral histories.

The mussels live in the dense surviving woodland that lies upstream of a public causeway through the Gearagh and through the reservoir. I have not been to see them and will not go. I want to get to know them without bothering them or intruding on their space. The Gearagh is also notoriously disorientating and difficult to navigate, for those who stray beyond the causeways.



Patrick Manning, was born in the Gearagh, and lived there until it was flooded. He first told me about the mussels.

Patrick Manning, interviewed by Aoife O'Leary McNeice, Independence Museum, Kilmurry, Cork 24 April 2025: there's some connection between them and the salmon, that the salmon is needed for them to reproduce and so on like so that while they're still there, I think that they're on a dwindling trend

What has science told me about the mussel?

Mussels were found throughout rivers in Ireland in nineteenth century. Due this commonplace nature, the mussel was not of much interest to scientists before the mid twentieth century. However, there are some exceptions.

NOTES ON SOME DISSECTIONS OF THE FRESH-WATER PEARL MUSSEL
(UNIO MARGARITIFERA). By JOHN BARKER, M. D., M. R. I. A.

This Lamellibranchiate Mollusc is of the Family Unionidæ, Suborder Asiphonidæ, and Order Conchiifera, and is found very widely distributed.

In 1865, John Barker, the curator of the Museum of the Royal College of Surgeons, Dublin and a microscopist published notes of a dissection he made of a pearl mussel that had been taken from a river in Kerry.

His notes are detailed yet abstract. I learned a mussel's stomach is large enough to hold a bean, but nothing about what the mussel eats. I learned it has a large foot but not where it walks.

I also visited mussel shells at the National Museum of Ireland that had been collected by professional and amateur scientists. The curator who showed me the shells could not have been more welcoming and generous with her knowledge. This is the state's collection, she stressed, it is open to all who wish to visit.

She had prepared two full shelves of freshwater mussels for me. One shelf was solely mussels, placed neatly in cardboard boxes that belonged, I think, to the collector. They had paper labels and some of them were also drawn on. In different people's handwriting, the species name was listed, along with the place it was collected.

The other shelf was more mixed up, it included a few boxes of mussels but also some other kinds of shells, some of which were held in a cigar box and old pill cases.

There was also a box of shells collected from the Aughrim River in Wexford, neatly tied with twine.

I came away reflecting more on the nature of the collection than the shells themselves. Removed from their rivers and their relational ecologies, labelled according to the year they were acquisitioned and what number acquisition they were, along with collector and place from which they came. The label is not concerned with the living life of the object, but rather the dead afterlife. Upon acquisition the object is transformed from a shell on the riverbed to a recorded part of our national history and memory.

pearl Mussel. Two Left
valves. King's River Co. Wick
Margaritana margaritifera

The

pearls are of small size, and of little

IRISH PEARLS

Today human knowledge of mussels is mediated through their scarcity; they are objects of conservation and preservation. Before this relatively recent development, mussels were most famous for the pearls they occasionally produce. In Ireland pearl fishing is a 1000s-year-old informal practice, carried out by subsistence labourers to supplement their incomes. This is an embodied form of knowledge, passed along within communities, and recorded in text by scientists, travel writers and journalists rather than the pearl fishers themselves.

Pearl fishers were subsistence labourers who did not engage with state institutions to impact and shape conservation legislation the way that those who study pearl mussels do today. Their knowledge was essentially less valued. This is clear in the way that pearl fishers were portrayed in the early twentieth-century.

SHARMAN D. NEILL LTD. BELFAST.

FROM IRISH RIVERS

PEARL FISHING IN A TYRONE STREAM.

An old Roman chronicler tells us "was induced to invade Britain I pearls found in its rivers. The I the greatest, were - rare in these waters - a woman's work to me also there is a great heart's parting in one of the bright, bonny streams of my native land. The remote valleys of dark Tyrone are try have - their own quality their fisheries - the gro twenty miles in a straight sight of the wild heath of horse. Kato in the head dextrally complicated river the Foyle, the Freshwater devote their entire time at pearl fishing. Bolcones the Mullaghmore - a small valleys of the Owenreagh, the name I have spent away which (in Angles) I shall is soon for the best in a E not "cribb'd, cabin'd, or ing on the ridge one sees, the ribbon of the stream of maximum length, taken round, as in the custom of time." Dotted on the are the whitewashed thatched homes of the poor peasantry. The land is poor and bleak, diversified here and there with a quill-pattern of farms. Around me are the signs of a rich nature past; here at hand is an Ogham stone, yonder on the far side of the valley is an ancient fort. My guide, a typical Irish mountain man, savours of an older world. He has heard every music of night at the ancient graveyard, which he describes as a "very precious place."

Pat is bilingual and has Irish idiom enhance with rare humour "the Must England. But to the pearl-fishing. The paraphernalia consists of an old pair of "brogues" (discarded boots), a bucket with a glass bottom, an old knife, a pointed stick, and hearts full of hope. We went our way to the stepping stones. It is a glorious August day. I discard my boots and stockings, don the old boggers, arm myself with my stick and bucket, and eagerly walk into the lime-green stream. The occupation of pearl-fishing is performed in the words of Thoreau: "with patient eye and unswerving gaze" for fortune may await one in every shell. Every river had but its treasure, looked as clear as day as the glass-bottomed bucket held perpendicularly in its wards. Without this rule the surface would be a waste of time. I look through my big mussel (which, had night, see a glowing mass my pointed stick in the instantly close, and the answer. I pull out the shell on the bank, and process in hour a hundred other - however, when patience says "tempt me no farther" I proceed to find my fortune in my blackish-brown case. Not with greater eagerness did Fortune's smiles proceed to their fate than did I prize spare shell after shell with Pat's old knife. Under Pat's tuition my thumb soon decorously investigated the soft fleshy parts of the mussel in one oval sweep, but, alas! in 60 cases out of 100 pushed nothing before it. At last Pat with his trained eye sees a likely shell, a big one, say five inches in length, with a twist in its back. I open it, round present my thumb, and "burr!" "Didn't I tell you now?" says Pat. Yes, in verity, a lovely little pearl of beautiful pink iridescence, and worth 10s or so. The other shells are opened with retentive energy, but none of them had the necessary spinal deformity, or at any rate the pearls were not

ing masses of silver chasing one corn, up the head now forced me to ease down in the pearl-fishing, and to make with a betarish. We dive when I explained produced a pearl grain of sand or a lone and beautiful of starting a Tyre tation Company in each. To his ch Linnean had antic had been paid 25d ment for the day, more irritated the terpiece did not pated the experience Clinow have no. We decided thereof denizens of the Ty security and poor Pearl-fishing. Mr Forle River eyeses Ballinacree and B perhaps in many o there was once fan of the glory of U and this mussel, a live, of adding a new gravel unit

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A journalist writing in 1908 described 'the remote valleys of dark Tyrone' which were 'an unknown country save to their own quaint mountain folk', some of whom practiced pearl fishing in the river Foyle. For the journalist, the pearl fisher was embedded within this mystical and undeveloped place 'the valley is an ancient fort. My guide, a typical Irish mountain man, savours of an older world.' *The Derry Journal*, August 19, 1908

Pearl mussels were not valuable as a commercial enterprise, and the practice of pearl fishing did not ascribe cultural or social capital to the practitioner. This differs from other river users and dwellers. Fishing for salmon has long been highly restricted and legislated for in rivers across Ireland, including the Lee.

Angling was a leisure activity, and the right to take salmon from rivers was purchased from landowners for an annual fee.

Pat Barry Murphy is a resident of the Lee Valley whose family's farm was partially flooded by the Lee Scheme. His aunt owned fishing rights to the portion of the river that flowed through her land and rented them out for £112 a year. This was enough money to pay her annual rate tax.

Angling was an activity associated with the affluent classes, something done in leisure time or on holidays.

Patrick Manning and Pat Barry Murphy both remember English anglers coming over for their holidays. Pat remarked that 'the Protestants would come t'would be always English would come like'. Another local, Anne McCarthy remembers a solicitor from Cork City who would also come up to fish for salmon in the river.

reaching to the size of a pea.

Scientists and pearlys both approach mussels as objects to be gathered, understood and extracted from in different ways, whether it's the extraction of information or of a pearl.

These are individualised acts of knowledge labour, that isolate the mussel from its wider community.

How else can we know the mussel? We can draw on the communal knowledge and understanding of landscapes and their stories held in folklore.

Bairbre Ní Fhloinn proposes that while 'conventional sources of literature and history are typically centred on the individual as agent and interpreter...folklore speaks with the authority of the group and with the sanction of accumulated tradition'.

Ireland has one of the largest folklore collections in the world. The government established the Folklore Commission in 1935 to collect and preserve Irish folk traditions.

What does folklore tell us about the freshwater mussel?

In folklore the mussel is embedded in lore about rivers, serpents and treasure.

The same story appears multiple times in the folklore collection about how the River Lee got its name.

Domhnall Ó Drisceoil who lived in Inniscarra where one of the Lee Dams now sits shared this story with the folklore commission in 1938: I have heard it told how the river Lee was supposed to derive its name. There was in Gougane Barra lake a serpent or big eel of some description. Either he left the district or was chased from it by the local people, who followed him along what is now bed of the River Lee. As he rested they shouted Tá Sé in a Luighe and hence the name Lee - Laoi. It was also said that the deep holes in the river were places where he rested. This story was heard by me from people now long since dead.

[The Schools' Collection, Volume 0348, Page 148]

St. Finbar and the Serpent

1. Nóra Ní Súilne
2. 15. Gougán a Mac a Ríog. Cillgarbhán
3. 32 blaíona. 4. Ingean Feirméora
6. Séan Mac Súilne, Gougán a Mac a Ríog
7. blaíona 8. 68 mblaíona.
9. Gougán a Mac a Ríog. 10. Luíona 19

There are not very many water-horses seen now in lakes or rivers but there were in olden times.

There were a lot of wild animals minding pots and rocks of gold formerly but there are none at present.

Writer - Eileen B. McGovern, Tonlodge, Bawnboy, Co. Cavan. This was told to me by Mr. Pat Smith, Teelboy, Bawnboy, Co. Cavan.

12. 10. 1938.

These water creatures were linked to the pearl mussel.

Nathaniel Colgan gathered stories from locals in Brandon Co Kerry in 1888 of large 'oval shellfish' called Carrabuncles that were said to shimmer and illuminate in rivers and lakes. It was understood that any pearls found in the river were from these animals.

In these stories, pearl mussel and river are entangled in a deeply synergistic relationship. The pearl, the mussel and the river itself are not necessarily separate entities, they exist in a holistic, overlapping way. These stories also ascribe value to the pearl mussel. They were part of strange often magical river menageries, rather than commonplace molluscs of little use or worth, or isolated shells in a museum drawer.

Irish Pearls.

We hear little to-day

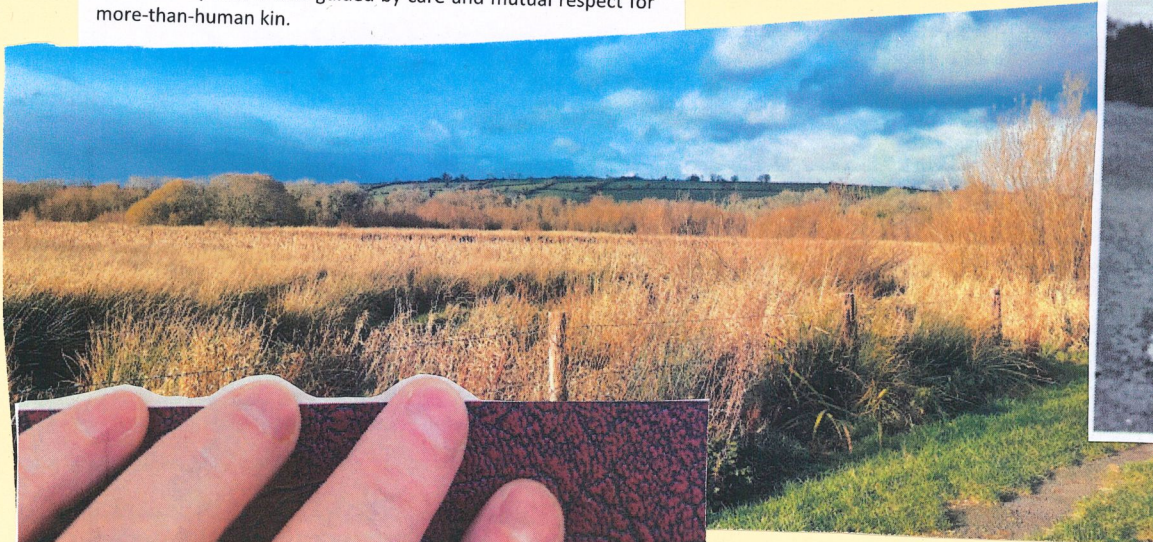
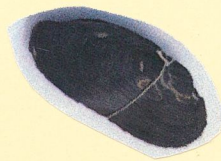
I have found mussels, in some ways hard to get to know, they are submerged, silent, perhaps a little strange.

I have also found that human ways of knowing mussels are historically contingent and shifting, particularly in comparison to the longevity and maintenance of mussels.

Engaging with mussels via only a single way of knowing obscures the varied and rich relationship we have had with these molluscs. Looking at them through the lens of various epistemologies gives us access to a long social and cultural relationship, that traces far beyond the boundaries of scientific ways of knowing.

Current national legislation and global conservation policies engage with mussels as a homogenous species rather than understanding them as so many individual, historically, socially and culturally specific communities. The mussels on the Lee will likely die out soon without the salmon. While other members of their species elsewhere will survive, the unique social and cultural relationships between the Lee mussels, the river, the salmon and Lee Valley humans will be lost.

To understand the fleeting contingency of our own ways of knowing, and the multiplicity of our relationships with the more-than-human it helps to engage in epistemological trespass and embrace as many ways of knowing as we can. I want to do this in a way that is also guided by care and mutual respect for more-than-human kin.



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Images:

Author [taken on visits]

Electricity Supply Board Archives [ESB]

E.A Moorkens

National Folklore Collection

National Library of Ireland

Royal Irish Academy

All oral history interviews will shortly be available as audio recordings and typed transcriptions at the Digital Collections and Archives of the University of Galway.

Thank you Ted Cooke, Patrick Manning, Tom Murphy, Anne McCarthy, and Pat Barry Murphy for being so generous with your time and knowledge and helping me get to know the Lee a little better.