

Owned by everyone? The wonder, plight and future of chalk streams

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Thursday 30 and Friday 31 March 2023

A conference held at the Cambridge Conservation Initiative, David Attenborough Building, University of Cambridge and Pembroke College Cambridge.

Conference Programme
for speakers and invited audience only



WildFish.

Cambridge
Conservation
Initiative

Thursday 30th March

08:45 Registration and coffee

09:15 Welcome - **John Fanshawe, CCI**

09:30 **Session 1: the crisis facing chalk streams**

11:00 Chair: Chris Smith

- Making something happen: Ted Hughes, wild fish and chalk streams - **Mark Wormald**
- The state of chalk streams - **Adam Nicolson**
- Assessing the Atlantic salmon and its subpopulations for the IUCN Red List of Threatened Species - **Catherine Sayer**

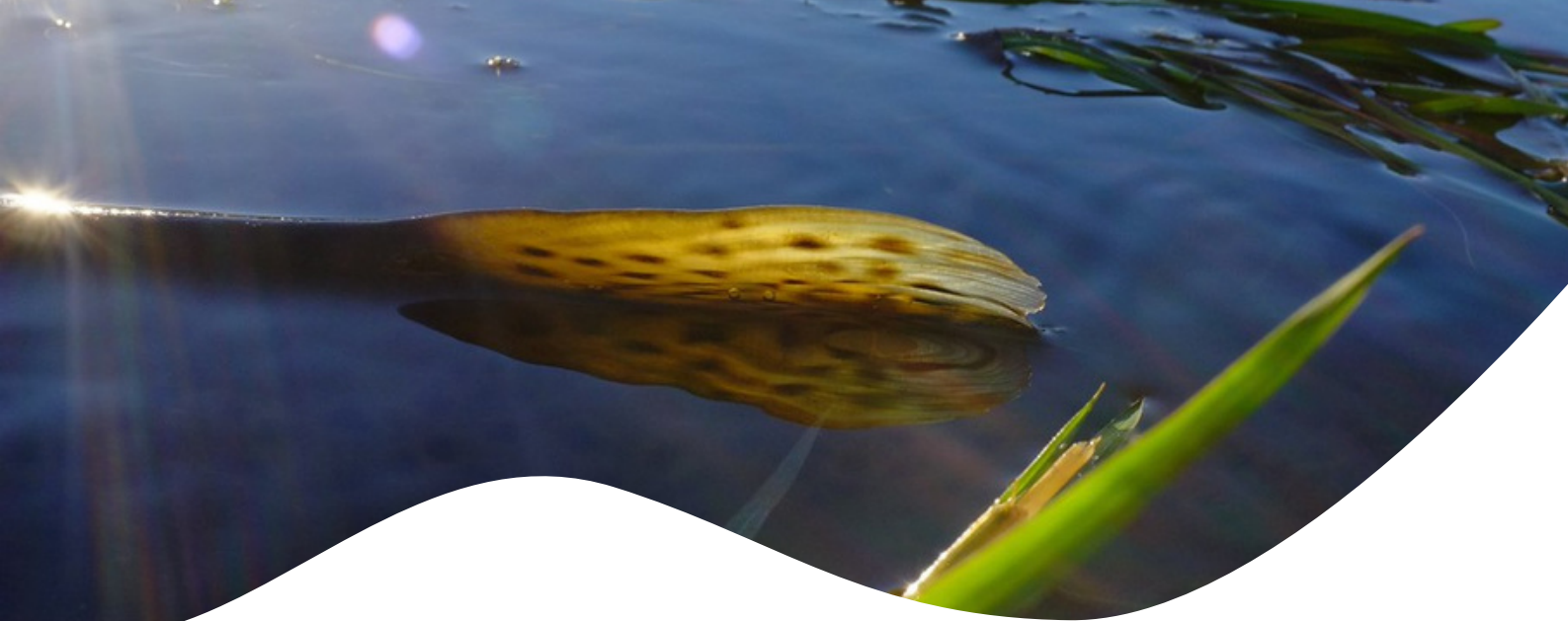
11:00 Coffee Break

Chalk was formed when much of our present land mass lay beneath the sea, and the armoured remains of innumerable tiny organisms accumulated to create a lithological bed of minerally rich calcium carbonate – a sedimentary monument to marine deaths some sixty million years ago. Groundwater percolates through this soft basement and forms aquifers, which issue as springs when sufficient pressure has built up; they are the cool-water deposit accounts from which chalk streams withdraw their currency.... Unlike our rain-fed moorland streams, these watercourses tend to maintain a steadier height, and carry dissolved nutrients that maintain a lively food web, with dramatic weed life – viridescent starwort, and water crowfoot with white flowers that frost the stream like a tequila glass. Ideally managed, chalk-stream water is indeed as clear and cold as an intoxicating spirit, and about as expensive.

Historically, chalk country has focused a particular image of rural Albion (some eighty per cent of the world's chalk streams are British), often the idyll of a peaceable, almost prelapsarian world that offers an antidote to the havoc of our lives.... It's a landscape that seems to offer nostalgia. Fishing the chalk has connotations of purity, seclusion and finesse. It may seem tame, but ... there is still much to be said for that gentle plainsong.

David Profumo

from *The Lightning Thread: Fishological Moments and the Pursuit of Paradise* (London: Scribner, 2021).



11:30

13:00

Session 2: nature live

Chair: Nick Measham

- Global swimways: developing a framework for conserving migratory freshwater fishes - **Tom Worthington**
- Beneath the water: filming freshwater fish - **Jack Perks**
- Salmonids and illustration: the art of interpreting fish form, function and colour - **Marc Dando**

13:00

Lunch

October 28th – My man Young, brought me a rat after breakfast. Began painting it swimming, when the governor made his appearance, bringing money and sat with me whilst at work. After four hours rat looked exactly like a drowned kitten.

October 29th – Cleaned out the rat, which looked like a lion, and enlarged picture.

November 5th – My man Young, who brought me another rat caught in the gin and a little disfigured, was employed by Hunt to hold down a wretched sheep whose head was very unsatisfactorily painted after a most tantalising display of obstinacy.

November 6th – Was advised by Hunt to paint the rat, but felt disinclined.

November 7th – After breakfast examined the rat. From some doubtful feeling as to its perfect portraiture determined to retouch it. Young made his appearance apropos with another rat, and (for Hunt) a new canvas from the carrier at Kingston. Worked very carefully at the rat and finally succeeded to my own and everyone's taste.

December 4th – Hunt's aunt and uncle came, both of whom understood most gratifyingly every object except my water-rat, which the male relation (when invited to guess at) eagerly pronounced to be a hare. Perceiving by our smile that he had made a mistake, a rabbit was next hazarded, after which I have a faint recollection of a dog or a cat being mentioned by the spouse, who had brought with her a sponge-cake and bottle of sherry, of which we partook at luncheon.

John Everett Millais

from *The Life and Letters of Sir John Everett Millais, President of the Royal Academy* (London: Methuen, 1899)

14:00

15:30


Session 3: nature and culture

Chair: Ali Morse

- Nothing is forgotten: nature and connection through chalk water - **Amy-Jane Beer**
- The culture, nature and land choices influencing our chalk streams- **Dylan Everett**
- 'Making and unmaking lines': Jeremy Hooker's 'Itchen Water' Poems - **Terry Gifford**

15:30

Coffee Break



The river Millais painted is the Hogsmill, as it was one summer 170 years ago. But it could be almost any English chalk stream. Lovely, lush, and just a bit mucky around the edges. William Holman Hunt later wrote about Millais' discovery of the location: 'We pursued the crystal driven weeds with reawakening faith, then suddenly the "Millais luck" presented him with the exact composition of arboreal and floral richness he had dreamed of, so that he pointed exultantly, saying, "Look! Could anything be more perfect?"'

I stand a while, staring at the brown water, trying to imagine how the scene might look in summer, when my breath catches. A kingfisher – a bloody KINGFISHER – zips upstream, a dart of supernatural blue fire. It's in my sight for the single gasp of a second and gone, but its electrifying passage has lit the day completely anew and I laugh in awe and disbelief. I know as I write that it's going to seem like invention – the poetic timing, the transformational effect.

But truly, nothing could have been more perfect.

On my way back to the bridge I meet an oak I estimate to be two or three hundred years old. I slot my fingers into the grooves of its bark, and ask what it remembers. And a reply I take to be not only that of the oak, but also of the kingfisher and the willows and the river crackles my synapses:

Nothing is mundane. Nothing is forgotten. We remember what for you is history, and long before that too. All that was is held, a potential, like voltage. All it takes for current to flow is connection – for circuits to be made.

Amy-Jane Beer

from *The Flow: Rivers, Waters and Wildness* (London: Bloomsbury Books, 2022)

16:00
-
17:30

Session 4: case studies

Chair: Ashley Smith

- The chalk landscapes of East Yorkshire - **Jon Traill**
- Overcoming Challenges to the Chess - **Kate Heppell**
- Drought, deer and dogs: an introduction to the stresses on Cambridgeshire chalk streams - **Rob Mungovan**
- Action for the Avon - **David Holroyd**

The great riverkeeper Frank Sawyer, writing in 1952, remembers from his boyhood before World War I the rippling map of waters covering the Avon valley.

Few rivers run very far down a valley without having a little brook, sidestream or minor river coming to join them... These little waters are usually fed by springs all along their course, and in all but very dry seasons, have a continual supply of pure water flowing down them....It has become part of my work each year to see that water has a passage along these little brooklets and drawings to keep clean the bright gravel of their beds.

Fifty years ago the waters of our valleys covered a surface almost treble that which they do to-day. Our river courses then were recipients of hundreds of tiny waterways, and of the multitude of creatures which each and all of the waterways produced. ...Those grass-fringed runnels, ditches and carriers remain vivid in my memory today, for everywhere was a scene of activity....everywhere were masses of crawling caddis and snails, every stone or loose turf sheltered a horde of shrimps and small fly larvae, while thousands of minnows scattered in panic as great trout and eels sped along the carriers to safety in the deep pools at the hatchways, or scrambled with their backs out of the water, to the drains and thence to the main river. Every pool was full of life.

Though called drawings, these waterways were the main drains of the meadowland. And being the main drains they were always well looked after and kept clean and tidy by the drowner in charge of the meadows. Their beds were bright and gravelly, and this fact was greatly appreciated by the trout, which during the winter ran up these sidestreams to spawn.

But little is now done to keep them pure and wholesome. The irrigation system is a thing of the past. The waterways of the meadow no longer produce trout and trout food or act as nurseries for the main river, for everywhere is a scene of neglect. The carriers which in bygone years brought life-giving water to the meadow vegetation are now dried up ditches —drains have been trodden flat with the countless hooves of cattle. Bridges, arches and bunny holes have all collapsed, hatches lie rotting by their structures...and now rest amongst the dried mud and other rubbish which fill places that were once aerated pools of water—the homes of innumerable creatures.

Frank Sawyer

from *Keeper of the Stream* (London: A&C Black, 1952)



John Everett Millais

Ophelia (1851-2, Tate Britain collection)

19:15

20:45

Writers and filmmakers' panel

Chair: Mark Wormald

A public event for the Cambridge Festival.

Owned by Everyone? The wonder and peril of our chalk streams with: Amy-Jane Beer, Tony Eva, Tom Fort, James Murray-White, Adam Nicolson, David Profumo and Alice Willitts.

Cockcroft Lecture Theatre, Pembroke Street, Cambridge

[Click here to reserve your place.](#)

Friday 31st March

09:00 Registration and coffee

09:30 Session 5: barriers

11:00 Chair: Fiona Reynolds

- Watermeadows: victims or saviours? - **Hadrian Cook**
- Chalk stream water quality: barriers to achieving higher classification – **Mike Foley**
- Pressure on water resources - **Trevor Bishop**

11:00 Coffee Break

Test

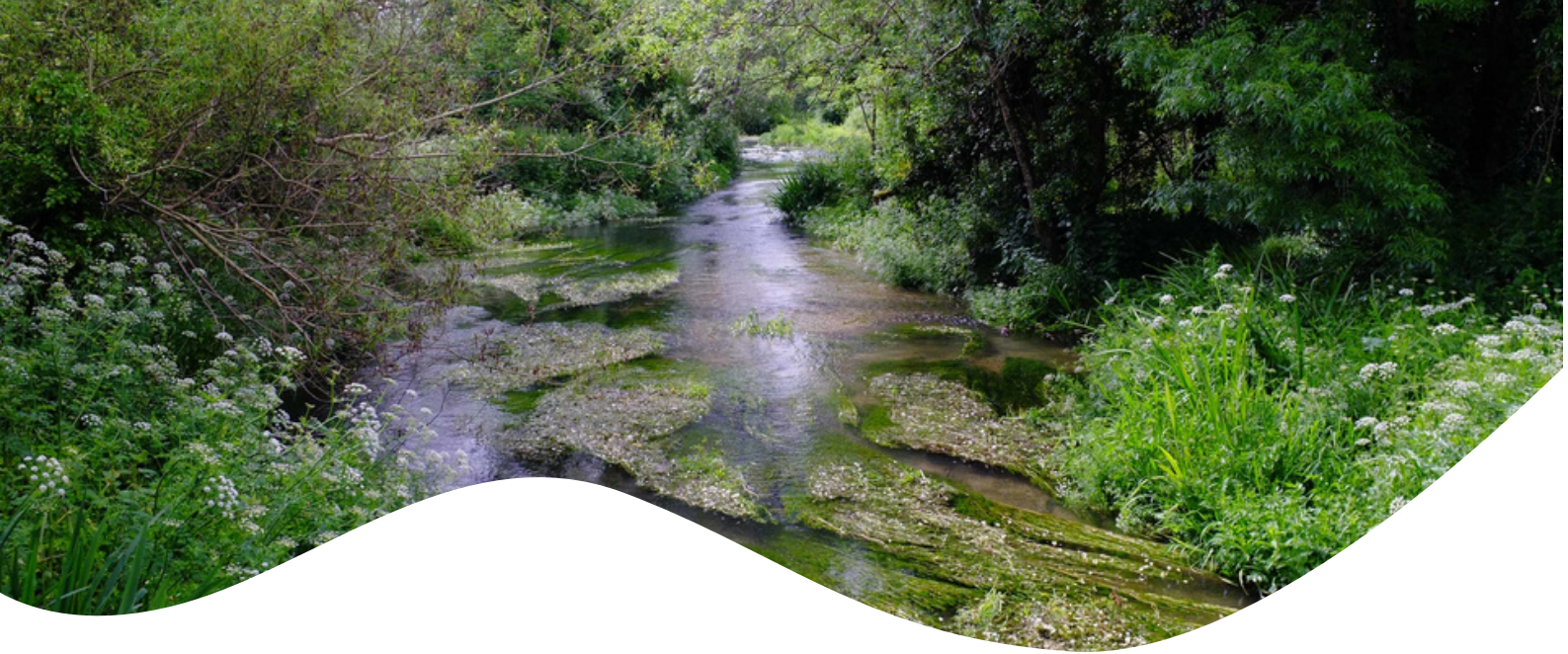
'Do you
have permission
to be here?'

'Does she
have permission
to be here?',
pointing ahead
to a slow walking woman,
dog on a lead.

'She is
the widow
of the owner.'

Serfs
Against
Sewage?

Terry Gifford



11:30

13:00

Session 6: opportunities

Chair: Shaun Leonard

- Owned by no-one? Why Rights of Nature, self-ownership and guardianship are important parts for the protection and restoration of our rivers - **Paul Powlesland**
- Water and the law: current cases and new opportunities - **Carol Day**
- Future fishing - **Stuart McTeare**

13:00

Lunch

In most nations around the world, rivers are public property: if you can get onto the river from the road or elsewhere it is yours to enjoy. English rivers are different. The rivers, access to them and the right to fish them are in private ownership. Every inch of bank and every square foot of fishing rights from the moment the water emerges from the ground to the tidal estuary is owned by someone, enshrined in ancient statute, and if you are one of those lucky few, you have the right to call yourself a riparian owner. So important are riparian rights and the right to erect fish weirs that they are referenced in both Magna Carta in 1215 and the Grand Remonstrance in 1641.

Those who fish the rivers of England generally come to know and understand the unique bounty of chalk streams. Down in their clear waters, where the temperature barely changes from winter to summer, the nymphs, shrimps, snails and young fish multiply. In other kinds of rivers, swollen and dirty with winter rains, they might be having a hard time, but here they thrive.

Diane Purkiss

from *English Food: A Social History of England Told Through the Food on Its Tables* (London: William Collins, 2022)

14:00

15:30

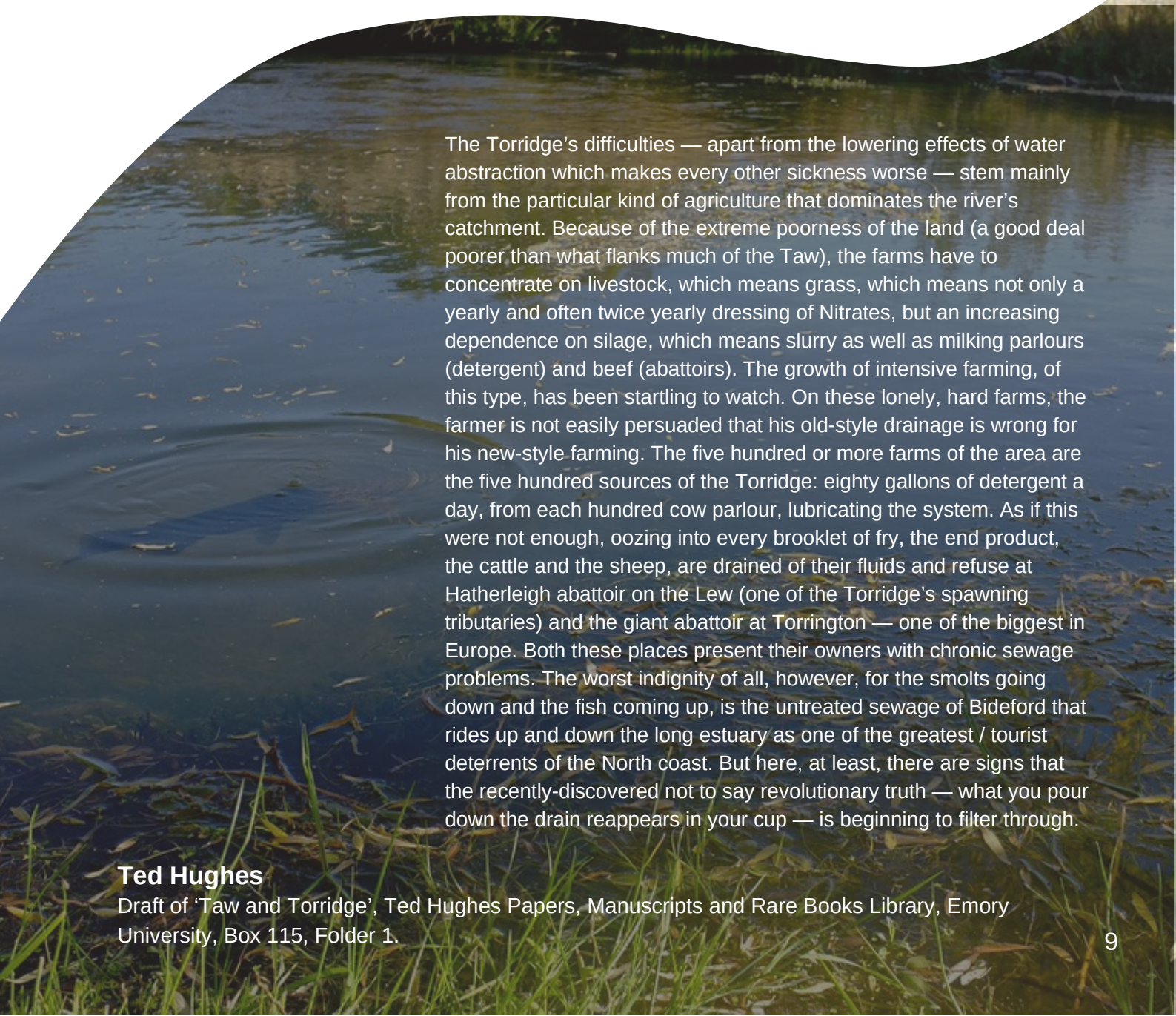
Session 7: solutions

Chair: Joe Crowley

- Developments on the Cam? - **Pippa Heylings**
- Fixed by everyone - a national strategy for the restoration of our chalk streams - **Charles Rangeley-Wilson**
- Landscapes and riverscapes - contemporary practice - **Stewart Clarke**

15:30

Coffee Break



The Torridge's difficulties — apart from the lowering effects of water abstraction which makes every other sickness worse — stem mainly from the particular kind of agriculture that dominates the river's catchment. Because of the extreme poorness of the land (a good deal poorer than what flanks much of the Taw), the farms have to concentrate on livestock, which means grass, which means not only a yearly and often twice yearly dressing of Nitrates, but an increasing dependence on silage, which means slurry as well as milking parlours (detergent) and beef (abattoirs). The growth of intensive farming, of this type, has been startling to watch. On these lonely, hard farms, the farmer is not easily persuaded that his old-style drainage is wrong for his new-style farming. The five hundred or more farms of the area are the five hundred sources of the Torridge: eighty gallons of detergent a day, from each hundred cow parlour, lubricating the system. As if this were not enough, oozing into every brooklet of fry, the end product, the cattle and the sheep, are drained of their fluids and refuse at Hatherleigh abattoir on the Lew (one of the Torridge's spawning tributaries) and the giant abattoir at Torrington — one of the biggest in Europe. Both these places present their owners with chronic sewage problems. The worst indignity of all, however, for the smolts going down and the fish coming up, is the untreated sewage of Bideford that rides up and down the long estuary as one of the greatest / tourist deterrents of the North coast. But here, at least, there are signs that the recently-discovered not to say revolutionary truth — what you pour down the drain reappears in your cup — is beginning to filter through.

Ted Hughes

Draft of 'Taw and Torridge', Ted Hughes Papers, Manuscripts and Rare Books Library, Emory University, Box 115, Folder 1.

16:00

17:30

Session 8: owned by everyone?

Chair: Tony Juniper

An open discussion introduced by Stephen Tomkins and Amy-Jane Beer.

The countless insects which haunt a rich hay meadow, all know who have eyes to see; and if they will look into the stream they will find that the water-world is even richer than the air-world.... Every still spot in a chalk stream becomes so choked with weed as to require moving at least thrice a year, to supply the mills with water. Grass, milfoil, water crowfoot, hornwort, starwort, horsetail, and a dozen other delicate plants, form one tangled forest, denser than those of the Amazon, and more densely peopled likewise.*

..... Lie down on your face, and look down through two or three feet of water clear as air into the water forest where the great trout feed.

Here; look into this opening in the milfoil and crowfoot bed. Do you see a grey film around that sprig? Examine it through the pocket lens. It is a forest of glass bells, on branching stalks. They are Vorticellae; and every one of those bells, by the ciliary current on its rim, is scavenging the water--till a tadpole comes by and scavenges it. How many millions of living creatures are there on that one sprig? ... See! here is another, with a full-sized young one growing on his back. You may tear it off if you will--he cares not. You may cut him into a dozen pieces, they say, and each one will grow, as a potato does. I suppose, however, that he also sends out of his mouth little free ova--medusoids--call them what you will, swimming by ciliae, which afterwards, unless the water beetles stop them on the way, will settle down as stalked polypes, and in their turn practise some mystery of Owenian parthenogenesis, or Steenstrupian alternation of generations, in which all traditional distinctions of plant and animal, male and female, are laughed to scorn by the magnificent fecundity of the Divine imaginations.

That dusty cloud which shakes off in the water as you move the weed, under the microscope would be one mass of exquisite forms--*Desmidiæ* and *Diatomaceæ*, and what not? Instead of running over long names, take home a little in a bottle, put it under your microscope, and if you think good verify the species from Hassall, Ehrenberg, or other wise book; but without doing that, one glance through the lens will show you why the chalk trout grow fat.

*To this list will soon be added our Transatlantic curse, *Babingtonia diabolica*, alias *Anacharis alsin astrum*. It has already ascended the Thames as high as Reading; and a few years more, owing to the present aqua-vivarium mania, will see it filling every mill-head in England, to the torment of all millers. Young ladies are assured that the only plant for their vivariums is a sprig of *anacharis*, for which they pay sixpence--the market value being that of a wasp, flea, or other scourge of the human race; and when the vivarium fails, its contents, *Anacharis* and all, are tost into the nearest ditch; for which the said young lady ought to be fined five pounds; and would be, if Governments governed. What an 'if'.

Charles Kingsley

from 'Chalk-Stream Studies' (*Fraser's Magazine*, May 1858)

Our Speakers

Amy-Jane Beer

Amy-Jane Beer is a biologist, naturalist, writer and a campaigner. Her recent book *The Flow; rivers water and wildness* is a journey of many rivers and species, following water, the ultimate connector of times, places and lives.

Trevor Bishop

As Director for Water Resources South East Trevor Bishop is responsible for the oversight of the Regional Plan which sets out both the reductions in abstraction needed to ensure Chalk streams are returned to sustainable flows and the investment needed to ensure sufficient water for people and the economy is maintained.

Stewart Clarke

Stewart is the National Specialist for Freshwater and Catchments with the National Trust and a Fellow of the Freshwater Biological Association. Stewart has a PhD in river ecology based on work in a number of chalk streams and has worked across the interface between practice, science and policy in freshwater conservation for over 20 years.

Hadrian Cook

Hadrian Cook has taught and researched in environmental science, environmental policy and landscape history, and his main research interests have focussed on historic floodplain management in England. He has held academic positions at Wye College and Imperial Colleges in the University of London, and also at Kingston University. He is a trustee and 'Drowner' for the Harnham Water Meadows Trust in Salisbury, and teaches in adult education.

Joe Crowley

Joe Crowley is a freelance broadcast journalist and presenter, working for the BBC's Countryfile, One Show and Panorama programmes as well as ITV's Tonight. His investigations often focus on exposing pollution and greenwashing and, as such, he's made a number of films on water companies, chalk streams and salmon farmers.

Marc Dando

Marc Dando has always balanced art and science, from university to graphic designer, wildlife and scientific illustration and publisher. For the past 25 years most of his work has been in wildlife illustration. His work has been exhibited at the Musée Océanographique de Monaco, The Mall Galleries in London and the Museum of Art, Fort Lauderdale, and public displays of his illustrations are now found in many aquaria around the world; but his work can most often be seen in books, field guides, scientific-based literature and magazines.

Carol Day

Carol Day has worked in the environmental sector for over 35 Years, undertaking policy work for two County Wildlife Trusts and WWF UK. She founded Leigh Day's environmental litigation service in 2013 and also works as a consultant solicitor for the RSPB focusing on access to justice. Carol was listed in the 2022 ENDS Power List and the Lawyer's 2023 Hot 100.

Tony Eva

Tony Eva is an earth scientist with a keen interest in environmental issues. His film about the development and decline of a crucial Cambridge chalk stream is in post-production.

Dylan Everett

Dylan Everett has lived and worked alongside the River Test on the Mottisfont, Hampshire for nearly twenty years. He works for the National Trust as a Countryside Manager alongside a small team of Rangers, looking after special places including the New Forest and the Mottisfont Fishery, notably home to F.M. Halford, one of the pioneers of modern dry fly fishing.

John Fanshawe

John Fanshawe is curator for the Arts, Science and Conservation at the Cambridge Conservation Initiative, and a senior adviser for strategy at BirdLife International. After studying law, John spent ten years working in Kenya and Tanzania. He has an MA in Art and Environment and co-founded the arts-science collective [New Networks for Nature](#).

Mike Foley

Mike Foley had a career as a farmland consultant in crop diseases. A member of Cam Valley Forum for seven years, he has interests in non-native invasive aquatic plants and has helped to eradicate the massive problem of Floating Pennywort on the Cam. He monitors river water quality especially phosphate and its impact on the aquatic environment, and recently has led citizen science monitoring to determine major sources of faecal contamination in support of wild swimming.

Tom Fort

Tom Fort spent most of his working life as a journalist, initially on local newspapers and subsequently for BBC Radio in London. He left the BBC in 2000 to write books, of which there have been eleven altogether including *The Book of Eels* and most recently *Casting Shadows*. He has a new book out in May called *Rivets, Trivets & Galvanised Buckets: Life in a Village Hardware Shop* which is about taking over the hardware shop where he lives near Reading.

Terry Gifford

Terry Gifford is Visiting Research Fellow in Environmental Humanities at Bath Spa University, UK, and Profesor Honorifico at the Universidad de Alicante, Spain. Author/editor of seven books on Ted Hughes, he also wrote *D. H. Lawrence, Ecofeminism and Nature* (2023), *Pastoral* (2020), *Green Voices* (2011) and *Reconnecting with John Muir* (2006). See <http://www.terrygifford.co.uk>.

Kate Heppell

Kate Heppell is a Professor of Physical Geography at Queen Mary, University of London. She is currently seconded to the Chilterns Chalk Streams Project to lead water quality work on the River Chess as part of the Chess Smarter Water Catchments initiative funded by Thames Water. Kate has over 20 years' experience of working on linkages between water quantity, water quality and habitat in the chalk streams of England.

Pippa Heylings

Pippa Heylings is Founder and CEO of Talking Transformation Ltd, a professional facilitation organisation with a focus on sustainable development and biodiversity conservation and a low carbon, climate resilient world. A District Councillor since 2018, she chairs the Planning and Climate Change and Environment Advisory Committees for South Cambridgeshire District Council, and is the Liberal Democrat candidate for South Cambridgeshire at the next General Election.

David Holroyd

David Holroyd is a Former Head of Estates at The Royal Botanic Gardens Kew. A lifelong fly fisherman from Yorkshire, he now leads the Wiltshire Fisheries Association's campaign to improve the water quality of the Hampshire Avon catchment. He is water monitoring lead for Salisbury and District Angling club which has over 13 miles of chalk streams and is one of the largest flyfishing clubs in the UK with a membership approaching 1800, of which 1400 are fly fishers.

Tony Juniper

Tony Juniper CBE is the Chair of Natural England. For more than 30 years, he has worked towards a more sustainable society at all levels from providing primary school education conservation to major international campaigns on rainforests and climate change. Formerly Executive Director for Advocacy and Campaigns at WWF-UK and President of the Royal Society of Wildlife Trusts, he is a Fellow of the University of Cambridge's Institute of Sustainability Leadership. Among his many books is the award-winning *What has Nature Ever Done for Us*.

Shaun Leonard

Shaun Leonard is an unashamed fish bloke, inspired by a childhood in and on the Indian Ocean and the trout streams of southern Ireland. A professional life in fishery management, now Director of the Wild Trout Trust. Avid fisher, disappointed that 50 years of practice only makes him worse at the pastime.

Stuart McTeare

Growing up on the mean monochrome streets of 1960s North London was hardly a well trodden path for a wannabe river keeper. But from Stuart McTeare's fledgling Feral from Finchley pond dipping days to a career in fishy conservation, today managing 25 miles of chalk stream across Hampshire and Wiltshire, time has not diminished his fascinated watery gaze.

Nick Measham

Nick leads WildFish, the UK's only charity campaigning for wild fish and their habitats. He feels strongly that inspiring us to care is the foundation for influencing governments and their regulators to protect our wild fish. Nick's obsession with fish is rooted deep in his early childhood. He was lost in water from the moment his parents bought his first rod at the age of nine. Fishing still matters but it is almost enough now just to know the fish are there.

Ali Morse

As Water Policy Manager at The Wildlife Trusts, Ali Morse works at a national level on policy related to all things watery, but her background is firmly in the chalk streams of Hampshire, where she managed Wildlife Trust projects for over a decade. She works on a range of topics affecting chalkstreams, including agriculture, sewage pollution, abstraction & invasive species, and advocates for a more integrated approach to the management of our water environment.

Rob Mungovan

Rob Mungovan joined the Wild Trout Trust in 2017 to become their Conservation Officer for the Eastern Region. This includes fen edge rivers of south Lincs, small chalk streams running through Cambridgeshire and Hertfordshire, and the more urban rivers on the periphery of London. His years spent looking for brown trout in South Cambridgeshire streams in the early 1990's led on to his degree project in Environmental Science, which led him to a range of posts in the Environment Agency, before he moved back to his home patch of South Cambs to become the Council's first Ecology Officer in 2001.

James Murray-White

James Murray-White is a writer and story-maker through lens-based media. His documentaries explore humans in landscapes - from the Bedouin of the Negev Desert, walking with a painter and a soil scientist 'In the footsteps of John Clare' around Helpston, to a Permaculture farmer facing eviction in Lincolnshire, and the enduring legacy of 'artist - poet - prophet' (scribed on the new gravestone of) William Blake: www.findingblake.org.uk He is also a part-time warden at a 50 acre nature reserve in the Gog Magog hills of South Cambridgeshire.

Adam Nicolson

Adam Nicolson has written books about places, poetry and history. He is married with five children and lives on a small farm in Sussex. His most recent book, *Life Between the Tides*, described his making of three small rockpools on the coast of Argyll and the lives of some of the creatures that came to occupy them.

Jack Perks

Jack is a professional wildlife cameraman having spent the last 10 years bobbing around nearly every watercourse in Britain! He spent 7 years on a mission to film every freshwater fish in Britain and has published books, magazine articles and filmed for many BBC Nature programmes. He's proud to be a vice president for WildFish.

Paul Powlesland

Paul Powlesland is a barrister and founder of Lawyers for Nature, which aims to transform the relationship between law, lawyers and nature. He acts to protect trees and rivers in the courts and campaigns for the Rights of Nature. He lives on a boat on the River Roding in East London, and set up the River Roding Trust, through which he carries out hands-on restoration and protection of the river.

David Profumo

David is a novelist and journalist, and a Fellow of the Royal Society of Literature. His books include *Sea Music*, *The Weather In Iceland*, and *Bringing The House Down*. He is the long-standing Fishing Correspondent for *Country Life* magazine, and author of *The Lightning Thread: Fishological Moments and the Pursuit of Paradise*.

Charles Rangeley-Wilson

Charles Rangeley-Wilson OBE is a writer and conservationist with a passion for chalk streams. Since the early 1990s he has played a key role in numerous restoration projects and campaigns: establishing the Wild Trust Trust and Norfolk Rivers Trust; contributing to WWF's reports Rivers on the Edge, The State of England Chalk Streams and Flushed Away; driving the River Nar restoration strategy. He is currently leading the Chalk Streams First campaign for a more sustainable approach to abstraction and is chair of the CaBA chalk stream restoration group.

Fiona Reynolds

After a long career in conservation, including as Director-General of the National Trust (2000-2012), Fiona was Master of Emmanuel College from 2012-21. She now holds a number of non executive roles spanning public policy (NAO), education (RAU), conservation (CFCE and INTO) land management (Grosvenor Estate and FFCC) and is a non executive Director of Wessex Water, campaigning for better regulation.

Catherine Sayer

Catherine is the lead for freshwater biodiversity in the IUCN Biodiversity Assessment and Knowledge Team, Science and Data Centre, based in the David Attenborough Building in Cambridge. A key part of my role is to increase the representation of freshwater biodiversity on The IUCN Red List of Threatened Species.

Feargal Sharkey

Feargal Sharkey OBE was once most widely known as the lead vocalist of the punk band The Undertones and as a solo artist. He subsequently rose to prominence in the UK music industry, with appointments as CEO of British Music Rights and head of UK Music, and was awarded an OBE in 2019 for services to music. A lifelong fly fisherman, Feargal is Chairman of Amwell Magna Fishery, a member of Cambridge Wild Trout Club and a Vice-President of WildFish Conservation. Feargal is a leading voice in the ongoing campaign against the pollution of British rivers and coastal waters, with 167,000 followers on Twitter and rising.

Ash Smith

Ash Smith is the founder of Oxfordshire-based Windrush Against Sewage Pollution - windrushwasp.org - a small group of volunteers that has been instrumental in the exposure of extensive criminal pollution by the water industry and the equally shocking failure of regulation. Team members gave evidence to the 2021 Environmental Audit Committee inquiry into river pollution has been very active in the media, most recently featuring in the BBC2 Documentary 'Our Troubled Rivers'.

Chris Smith

Chris Smith (Lord Smith of Finsbury) is Master of Pembroke College; he was Secretary of State for Culture from 1997 to 2001, and Chairman of the Environment Agency from 2008 to 2014. He is Chairman of South Staffs and Cambridge Water Company.

Stephen Tomkins

Stephen Tomkins, of the local Cam Valley Forum, spent some of his youth by the Kennet, read Zoology at Cambridge, taught Biology in schools in Uganda, the Fens and in then in Cambridge itself. He initiated an international examination in Sustainable Development for 16 year-olds, and later trained graduate Biologist for teaching at Cambridge. He is an Emeritus Fellow of Homerton College.

Jon Traill

Jon has worked in the conservation sector for over 25 years [22 of those with Yorkshire Wildlife Trust] and describes himself as a self-taught field naturalist. His areas of greatest knowledge are rivers and wetlands and British mammals. A great deal of his work time is spent creating habitat linkages for wildlife, across the East Yorkshire farmed landscape. In his spare time he loves watching sport, growing vegetables and listening to music with a good single malt.

Alice Willitts

Alice Willitts is a poet and plantswoman from the Fens. She is the author of *Think Thing: an ecopoetry practice*, (Elephant Press, 2021), *With Love*, (Live Canon, 2020) and *Dear*, (Magma, 2018). Alice co-founded On The Verge Cambridge and is the editor of *River Cam Erasure* highlighting damage to a precious, chalk stream ecosystem.

Mark Wormald

Mark Wormald has been a Fellow and College Lecturer in English at Pembroke College Cambridge since 1992. He is the author of *The Catch: Fishing for Ted Hughes* (Bloomsbury Books, 2022), has co-edited two collections of essays on Ted Hughes, and is Chair of the Ted Hughes Society.

Tom Worthington

Tom is an aquatic ecologist undertaking research in both freshwater and marine environments. Projects are centred on conservation of aquatic organisms and environments at landscape and global scales. The work provides a critical tool for encouraging conservation and restoration and enabling robust, data-driven policy changes and investments.

To the River Itchin, near Winton

Itchin, when I behold thy banks again,
 Thy crumbling margin, and thy silver breast
 On which the self-same tints still seem to rest,
Why feels my heart the shiv'ring sense of pain?
 Is it that many a summer's day has passed
Since in life's morn I carolled on thy side?
Is it that oft since then my heart has sighed
 As youth, and hope's delusive gleams, flew fast?
Is it that those who circled on thy shore,
Companions of my youth, now meet no more?
 Whate'er the cause, upon thy banks I bend
Sorrowing, yet feel such solace at my heart,
 As at the meeting of some long-lost friend
 From whom, in happier hours, we wept to part.

William Lisle Bowles

From *Fourteen Sonnets* (1789)

The bird's-eye perspective before her was not so luxuriantly beautiful, perhaps, as that other one which she knew so well; yet it was more cheering. It lacked the intensely blue atmosphere of the rival vale, and its heavy soils and scents; the new air was clear, bracing, ethereal. The river itself, which nourished the grass and cows of these renowned dairies, flowed not like the streams in Blackmoor. Those were slow, silent, often turbid; flowing over beds of mud into which the incautious wader might sink and vanish unawares. The From waters were clear as the pure River of Life shown to the Evangelist, rapid as the shadow of a cloud, with pebbly shallows that prattled to the sky all day long. There the water-flower was the lily; the crowfoot here.

Thomas Hardy

From *Tess of the D'Urbervilles* (London: Osgood, McIlvaine & Co., 1891)

Chalk Stream Warnings Issued to Environment Agency at 16h30 on Tues 8 Oct 2019

Mimram spectre, 5 to 7. Very low. Dry occasionally dead.

Beane wraith, 6 to 8. Very dry. Thundery showers. Poor, occasionally dead.

Ver mane, backing 5 to 7. Death imminent.

Chess shade.

Hiz phantom. Recent rain, falling slowly at first.

Rib

Quin

Granta

Cam extraction becoming severe. Ghost expected soon.

Gade demonic 6 to 8.

Shep eidolon.

Bulbourne ghoul.

Stort kelpie.

Thames sewage. Occasionally 4 at first. Increasing 8 at times.

Hughenden Stream occasionally damp. Rain or showers. Poor.

Rhee spectre.

Ivel frequent skeletons. Recent rain, poor. Falling more slowly for a time.

Lea revenant.

Oughton mane. Occasional puddles in far south.

Showers, poor.

Misbourne counting skeletons, very high. Dry occasionally dead.

Itchen

Wissey

Test

Colnbrook weakening. Ghost expected soon.

General synopsis. Only

one in eighteen flowing

becoming poor

at higher reaches

occasional puddles

for a time.

Dry.

Alice Willitts