Welcome to the 32nd Festival!

And we’ve a new hybrid format, to help wellbeing and access. There are events indoors, outdoors and online (via YouTube). For various events, workshops in particular, numbers are limited and booking is essential.

**Booking:** Either online from our website [www.oisf.org](http://www.oisf.org) or through the VisitScotland Kirkwall iCentre.

**Tickets:** In addition to booking individual events, you can buy a Lecture-Pass which for a single payment of £48 (concession £38) provides admission to a total of 24 events, including many talks and two concerts.

**Wellbeing:** Measures will be in place to ensure everyone can feel safe and enjoy the Festival: see details on our website [www.oisf.org](http://www.oisf.org).

**More information:** See our online magazine Frontiers for more about Festival speakers and events, as well as science, exploration and Orkney generally. [www.frontiersmagazine.org](http://www.frontiersmagazine.org)

**Updates:** See [www.oisf.org](http://www.oisf.org) and our Facebook and Twitter pages.

**Contact:** We’re on 01343 540844, orkneyscience@gmail.com

**Disclaimer:** The Festival reserves the right to alter, amend or cancel the programme contents at its discretion or as circumstances may necessitate.

Remember the Molecule Hunt around the Kirkwall shops! There are 18 molecules to find, each connected with the business. See leaflets in shops and the Kirkwall BID website (www.kirkwallbid.co.uk).

**Scotland’s Year of Stories 2022**

2022 is Scotland’s Year of Stories, celebrating stories inspired by, written or created in Scotland. This year’s festival will feature some of the great ones – of sea journeys and wartime survival, past legends and new narratives for the future, ships of the Neolithic and music of the stars. You’ll see some highlights in these listings and there are further stories woven in elsewhere in the programme.

Find out more at [visitscotland.com/stories](http://visitscotland.com/stories) and join the conversation using #TalesOfScotland

SUPPORTING

**Year of Stories 2022**
Wednesday 31 August

6.00 – 7.30 pm

BRINGING THE LIGHT BACK

ONLINE

Dr Vassilios Spathopoulos shows a model of a 2,000-year-old gear-wheel computer. Stromness Museum and Orkney Fossil & Heritage Centre show fossil fish from ancient Lake Orcadie. Then it’s Kansas for Jake’s Midnight Science Club – family science from Dr Steven ‘Jake’ Jacobs, former Discovery Channel chief scientist.

Thursday 1 September

11.30 am – 12.30 pm

The Grimond Lecture

Phoenix Cinema, Pickaquoy, Kirkwall

ENGINEERING THE FUTURE

Is there any way to shift from our current self-destructive path to a more stable world? Yes, says the pioneers in the new field of transition engineering, developed to tackle big complex global problems in a systematic way. Daniel Kenning and Prof. Susan Krumdieck explain how we can develop route maps for the future. Tickets £5 & £3

This event will also be livestreamed

12.30 – 2.30 pm

EMEC, Billia Croo, by Stromness

OCEAN ENERGY OPEN DAY

The European Marine Energy Centre (EMEC) is hosting an Open Day at its Billia Croo wave energy test site. Learn about Orkney’s waves and tides and the technology being developed to harness their energy, meet some of the EMEC team, tour the site and see some of the environmental monitoring equipment. Admission free

2.00 – 3.00 pm

Phoenix Cinema, Pickaquoy, Kirkwall

EARLY POTATOES AND EDIBLE CLAY

Up on the high plateau of the Bolivian Altiplano around Lake Titicaca, where the potato was domesticated, the Aymara people eat their potatoes with a light white clay. But why? Samples taken by geologist Dr Stewart Redwood give a clue to a vital step in the story of the potato’s development into such an important crop today. Tickets £5 & £3

3.30 – 4.15 pm

John and Ann Cumming Memorial Lecture

ORKNEY’S ANCIENT GRAIN

How far back can we trace the origins of bere, Orkney’s six-rowed barley? A very long way, says Prof. Terry Brown of Manchester University. Using DNA sequencing and other biomolecular methods it’s possible to build a picture of bere’s evolution over the centuries – revealing it’s been grown in Orkney for more than 4000 years.

5.15 – 6.15 pm

Town Hall, Stromness

THE SURGE OF WAVE AND TIDE – AND HYDROGEN

News continues of further Orkney developments in renewables. At sea there are new wave and tidal devices on site. On shore there are vanadium flow batteries to smooth the tidal-powered production of hydrogen in Eday. Speakers from the European Marine Energy Centre (EMEC) report on the latest developments. Tickets £5 & £3

7.30 – 8.30 pm

Orkney Theatre, Kirkwall

WHAT MAKES VIRUSES TICK?

Ticks – and the diseases they carry – are an increasing problem in Scotland. A new project at the MRC-University of Glasgow Centre for Virus Research seeks community assistance to report locations. Two team members, Dr Benjamin Brennan and Sam Langford, introduce tick biology and identification – and how to stay safe. Tickets £5 & £3

9.00 – 9.30 pm

Earl’s Palace, Kirkwall

THE EARL, THE BISHOP AND THE SPRINGTIME OF SCIENCE

Find out about an Orkney Earl’s marriage proposal, an Orkney bishop’s book dedication, and a mathematician in the family – and how these are all connected to a web of political and religious conflict out of which modern science developed. With music of the time by Kate Fletcher and Corwen Broch. Tickets £7

With the kind support of Historic Environment Scotland

9.00 – 9.30 pm

A LAND OF LIMESTONE

ONLINE

It’s a world of rivers and intermittent lakes, sinkholes and limestone pavements, chasms and underground caves. Dr Edward Kobal describes Slovenia’s karst and the food it produces – apples and plums, beans and turnips, and grapes in loamy terra rossa soil.
**Friday 2 September**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Fee</th>
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<tbody>
<tr>
<td>10.00 – 10.45 am</td>
<td><strong>THE MEASURE OF ALL THINGS</strong>&lt;br&gt;Our society depends on measurements, billions each day. Prof. Richard Brown, the National Physical Laboratory’s Head of Metrology, explains the science of measurement.</td>
<td>ONLINE</td>
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<tr>
<td>11.00 am – 12.30 pm</td>
<td><strong>TEA FOR TRANSITION</strong>&lt;br&gt;Join Daniel Kenning over tea/coffee/biscuits to hear more about Transition Engineering. Today: how systems work, and how history can show how they respond to external change. Booking essential. <strong>Tickets £8</strong></td>
<td>Stromness Hotel</td>
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<tr>
<td>11.00 am – 1.00 pm</td>
<td><strong>HYDROGEN FUEL CELL OPEN DAY</strong>&lt;br&gt;Join EMEC's hydrogen team at the Kirkwall Pier hydrogen fuel cell to find out about the process of producing hydrogen from renewable energy. <strong>Admission free</strong></td>
<td>Kirkwall Pier</td>
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<td>11.30 am – 12.30 pm</td>
<td><strong>THE ARCTIC WHALERS</strong>&lt;br&gt;Len Wilson, former boatbuilder, tells of ships and men. Naval architect Dennis Davidson describes strengthening ships to withstand ice pressure and his own design of the aluminium motorboat Polar Bound. <strong>Tickets £5 &amp; £3</strong></td>
<td>Phoenix Cinema, Pickaquoy</td>
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<td>2.00 – 3.00 pm</td>
<td><strong>THE MAN WHO RAN THE KATHLEEN ANNE</strong>&lt;br&gt;Local historian Patricia Long tells of a shipwreck and its skipper's long Orkney links. Dr Maria Pia Casarini describes his rescue mission with Shackleton, in an open boat, through blizzards and mountainous seas. <strong>Tickets £5 &amp; £3</strong></td>
<td>Phoenix Cinema, Pickaquoy</td>
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<td>From 3.00 pm</td>
<td><strong>AFTERNOON TEAS</strong>&lt;br&gt;Enjoy tea or coffee and fresh local produce, with a 10-minute story around 3.30 pm. Today John Goodlad tells of Shetland smuggling and Faroe brandy. <strong>Admission £8</strong></td>
<td>Peedie Kirk Hall, Palace Road, Kirkwall</td>
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<td>3.30 – 4.15 pm</td>
<td><strong>TREASURE ISLANDS: TALES OF MARINE SALVAGE</strong>&lt;br&gt;In a lifetime's career in marine salvage, Alec Crawford has explored wrecks from Spanish Armada remnants to the SS Politician and the White Star Liner Oceanic.</td>
<td>ONLINE</td>
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<td>5.15 – 6.15 pm</td>
<td><strong>Dr Raymond Lamb Memorial Lecture</strong>&lt;br&gt;Feasting with the Earls at the Bu&lt;br&gt;Excavations at the Bu in Orphir suggest a nearby earl's hall. Dr Colleen Batey and Prof. Ingrid Mainland describe the Orkneyinga Saga story and the modern finds. **Tickets £5 &amp; £3. **In association with the Society of Antiquaries of Scotland</td>
<td>Orkney Theatre, Kirkwall</td>
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<td>6.45 – 9.30 pm</td>
<td><strong>FROM HOY TO HUDSON BAY AND BACK</strong>&lt;br&gt;Take the 6 pm ferry from Stromness for a journey to the old Nor’Wast. Janette Park describes Orkney's long links with the Hudson's Bay Company. Dr Maria Pia Casarini tells the story of the company itself. Admission free but book the ferry.</td>
<td>Hoy Kirk</td>
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<td>7.30 – 8.15 pm</td>
<td><strong>FILM: DARK ENCHANTED ISLE: FROM MOANESS PIER TO ORGIL</strong>&lt;br&gt;Arrive by sea, with the view of the Hoy hills. Meet the ferryman and watch the pier being built. <strong>Narrated by John Budge with voices from Hoy Heritage project, Tales o Hoy.</strong></td>
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<td>7.30 – 8.30 pm</td>
<td><strong>THE SALT ROADS</strong>&lt;br&gt;John Goodlad describes how salt fish from Shetland became one of the staple foods of Europe and powered the Shetland economy for more than 200 years. <strong>Tickets £5 &amp; £3. This event will also be livestreamed.</strong></td>
<td>Orkney Theatre, Kirkwall</td>
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<td>9.00 – 10.00 pm</td>
<td><strong>HAAL IN DA DROGUE AN GIE DA BOYS A BISCUIT</strong>&lt;br&gt;Shetland’s salt fish trade inspired many artists, poets, film makers and musicians, as John Goodlad tells Spencer Rosie. Three in a Bar play Shetland and Orkney tunes, and there’s a taste of Shetland salt cod and pale ale to launch his new book. <strong>Tickets £6</strong></td>
<td>The Orkney Club, Harbour Street, Kirkwall</td>
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<td>9.00 – 10.00 pm</td>
<td><strong>THE ORKNEY SKY AT NIGHT</strong>&lt;br&gt;Join Eric Walker to hear what to look for and how to recognise it. There will be pictures, star maps, and time to ask about stars and planets and using a telescope.</td>
<td>ONLINE</td>
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Saturday 3 September

10.00 – 11.00 am

HORIZONS FROM THE HARBOUR
Research students from three universities share progress of their work in Orkney, hosted by Dr Mike Bell.

10.00 am – 12 noon

OUTING: WILDFLOWER SEED COLLECTION
Join biodiversity specialist Eileen Summers to look for wild seeds, with park designer Paul Green, ethnobotonist Anna Canning on plant uses, and artist Lin Chau on using seeds and leaves in papermaking. Tickets £8

10.00 am – 4.00 pm

FAMILY DAY
Visit Dynamic Earth’s travelling planetarium. Try activities from Glasgow Science Centre, the Scottish Dolphin Centre, and the Scottish Seabird Centre. Go on a tick hunt, learn computer coding, see a model of a 2,000-year-old computer. Navigate by the stars the Polynesian way. Tickets for morning and afternoon sessions, £8 & 5 with planetarium, £5 & 3 without.

10.30 am – 12.30 pm

SITE VISIT: WHERE THE EARLS FEASTED
A tour of the Earl’s Bu site in Orphir, from the Round Church to the mill site, with archaeologist Dr Colleen Batey. Tickets (including Orkney lunchbox) £15

11.30 am – 12.30 pm

WHO Owns THE SEA?
The quota system has brought ownership of fish. Could further developments, such as offshore wind farms, extend to the seabed? Dr Sandy Kerr of ICIT. Tickets £4 & 2

11.30 am – 12.30 pm

LIVING WITH A STAR
It’s a massive atom-smashing machine; a seething mass of electrified gases, says Prof. Robert Walsh. With images from the very latest space-based telescopes, he guides from the solar core to surf the solar wind. Tickets £5 & 3

1.00 – 4.00 pm

VINTAGE RALLY
Beautifully restored vintage vehicles, classic cars and tractors, and the sound of engines in action. Street food from late morning

2.00 – 4.00 pm

AN ARCTIC AFTERNOON
Hear about John Rae and the Northwest Passage. Polar historian Dr Maria Casarini tells of the search and Rae’s final link. Sea ice expert Prof. Peter Wadhams describes changing climate conditions opening it up. In association with the John Rae Society. Tickets £8

2.00 – 2.45 pm

SIT ME DOON WITH MR BOOM
I have some problems with my Auntie-Gravity suit. Hence, I may materialise from the Space Ship Imagination in a sitting position rather than a standing one! Tickets £5 & 3

2.00 – 4.30 pm

THE FOSSIL SHORE OF LAKE ORCADIE
Join geologist Dr John Flett Brown on the classic Orkney walk along the West Shore of Stromness in this new film made by Mark Jenkins. The journey begins with a fossil beach on the shore of ancient Lake Orcadie.

2.00 – 5.00 pm

THE ROCK CYCLE (YAMAGUCHI)
Art explores the deep time of geology in a new Japan-Scotland exhibition, developed by artist Ilana Halperin and curator Naoko Mabon. Join them on a tour with artists Yoshiihsa Nakano and Keijirō Suzuki from Yamaguchi and Orkney geologist Dr John Flett Brown, plus a workshop. Tickets £10

2.00 – 4.00 pm

LINT AND YARN WORKSHOP
Join Dr Ragnhild Ljosland and Mark Cook for a hands-on workshop on working flax. Try processes transforming flax plants into workable fibres, make a cord, learn how the Norse used flax and linen. Tickets £18. In association with Orkney Viking Week

3.00 – 4.00 pm

NUFURTURING THE WILD
Naturalist/author Polly Pullar speaks of the joys and heartbreaks of hand-rearing and rehabilitating many wild creatures: squirrels, owlets, hedgehogs. Tickets £5 & 3
Saturday 3 September

6.00 – 7.00 pm
**THE MYSTERY OF THE STRONSAY MONSTER**
Orkney Theatre, Kirkwall
Archive documents suggest the story reached Lord Byron in Geneva in the dark summer of 1816. Howie Firth describes the implications for literature and science. **Tickets £5 & 3**

7.30 – 8.00 pm
**KIRKWALL CITY PIPE BAND**
Broad Street, Kirkwall
With their final parade of the season (weather permitting).

8.00 – 8.45 pm
**ANCIENT STORIES, MODERN SEAS**
ONLINE
Oceanographer Dr Neil Banas looks at how an ancient story by a master Haida mythteller, Skaay, reflects the marine ecology on the North Pacific Ocean’s edge.

8.00 – 9.00 pm
The Orkney Club, Harbour Street, Kirkwall
**DICKENS’S FAVOURITE BLACKING FACTORY**
While exploring his family history Neil Price found a series of clues to a factory and its owner. He travels back to 1836 with Dave Grieve on a trail of detection. **Tickets £6**

9.00 – 10.30 pm
**THE SWEET SOUNDS OF THE SYNTHEZISER**
ONLINE
Synthesizer players in the north invite you to join them to hear a mixture of pieces and find out more about the workings of synthesizers and their rich range of sounds.

Sunday 4 September

10.00 am – 2.00 pm
From Kirkyard Car Park, Warebeth, Stromness
**SHORE AND SEAWEED WORKSHOPS**
Come out to the West Shore for four family-friendly activities. Identify seaweeds, make seaweed artwork. Forage for pigments, seaweeds, plants. Build a beach fire to cook a foraged lunch. Search for fire flints and clays, make an Orkney shell farm game. Booking essential. **Tickets £12 & 8.**

10.00 am – 11.30 am
Stromness Museum
**STROMNESS SHORELINE RAMBLE**
See some of the Museum’s natural history collection, then set off to the Point of Ness and beyond to see seashells and stromatolites, granite rocks and wildflowers. With stories on the way and views across the harbour. **Tickets £10, with the price including a Museum entry ticket valid for 7 days.** A second Ramble takes place from 2.00 – 3.30 pm.

10.00 am – 3.00 pm
Ring of Brodgar, Stenness
**OPEN DAY: WILDLIFE AND CONSERVATION**
Join Orkney Native Wildlife Project to look for the native Orkney vole, make nature journals, and meet members of the world’s largest stoat eradication project, in this family-friendly open day. **There is no charge for this event.**

11.15 am – 12.30 pm
St Magnus Cathedral, Kirkwall
**SCIENCE FESTIVAL SERVICE**
Conducted by Rev. Fraser Macnaughton, with the St Magnus Cathedral Choir.

11.30 am – 12.15 pm
Peedie Kirk Hall, Kirkwall
**CLOSE TO WHERE THE HEART GIVES OUT**
ONLINE
Dr Malcolm Alexander looks back at a year in the life of an Orkney doctor, and reflects on the work of an island GP, living in the heart of the community, coping with the varied situations that can emerge.

2.00 – 3.00 pm
**GAAN NORT**
Peedie Kirk Hall, Kirkwall
Around the North Isles, farmers have been looking back at the changes through their lifetimes in recorded interviews with Dr Tom Rendall and Ailsa Seatter, among them Jimmy and Mary Lennie, Irvine Miller, Ena Hewison, and Steven Drever. **Tickets £5 & 3. Project supported by the North Isles Landscape Partnership Scheme**

3.00 – 4.00 pm
**OUTING: THE RING OF BRODGAR**
From car park, Ring of Brodgar, Stenness
Rangers Sandra Miller and Elaine Clarke of Historic Environment Scotland explain about the site, its history, archaeological investigations and its place in Orkney’s Neolithic past. **Admission free. With the kind support of Historic Environment Scotland.**
Sunday 4 September

3.30 – 4.15 pm
SAILING NEOLITHIC SEAS
To reach Orkney in Neolithic times meant building vessels strong enough to cross the Pentland Firth and safely carry cattle, timber and people. Dr Mark Cooper of the University of Washington has looked at ancient seacraft designs in many places.

ONLINE

5.00 – 6.00 pm
FILM: DRAWING ARCHAEOLOGY
The atmosphere of the world-famous Ness of Brodgar excavations is captured in drawing, painting and sound, by Karen Wallis, an Artist in Residence since 2016.

ONLINE

6.30 – 7.15 pm
DYNAMIC EARTH’S TRAVELLING PLANETARIUM
Tickets all sold for both sessions

Stromness Academy

7.30 – 8.30 pm
CONCERT: MUSIC FOR THE WINTER QUEEN
Music from the 17th century and today and the poetry of John Donne, born 450 years ago, and the story of a war that wove together the lives of Donne, Kepler and Galileo. Dave Grieve tells the story, with music by the Mayfield Singers with Ewan Robertson, Valerie Webster, Lilian Kelly and George McPhee. Tickets £5 & £3. Supported by Loganair.

St Magnus Cathedral, Kirkwall

7.30 – 7.45 pm
FILM: THE DEER WOMAN
The need to rethink the human relationship with the natural world is the context of Selena S. Kuzman’s new performance film. It draws on the old Highland stories of deer shapeshifting into women, bridging the human and natural worlds. Costume and headress are created from found and pre-loved fabrics and objects from the past.

ONLINE

7.45 – 8.30 pm
FILM: WHEN THE GRASS DANCES
Join an artist, a poet and a naturalist looking at Orkney’s grasses. Mark Jenkins’s film weaves together natural history, botany, poetry and photography. With Rebecca Marr, Valerie Gillies and John Crossley.

ONLINE

9.00 – 9.45 pm
THE QUEEN OF SCIENCE
Astronomer, mathematician, writer, Mary Somerville was one of the 19th century’s most remarkable people. Cartographer Ian Archibald tells her story.

ONLINE

9.00 – 9.45 pm
AFTER THE CONCERT: AND IN THESE CONSTELLATIONS THEN ARISE
Composer Edward McGuire in conversation, on his setting of Three Donne Lyrics and his interest in Donne’s life and work amidst the turmoil of the 17th-century scientific revolution. With an introduction to the bass flute by flautist Ewan Robertson. Tickets £6

The Orkney Club, Harbour Street, Kirkwall

Monday 5 September

10.00 – 10.45 am
THE YEAR WE ALL WENT BACK
Will things ever get back to what they were before Covid? “I don’t think they will,” says epidemiologist Prof. Mark Woolhouse of Edinburgh University, “but that may not be all bad news. We have to do better next time, so let’s start thinking now.”

ONLINE

10.30 – 11.30 am
WORKSHOP: MAKING COMPOST
Ecological gardener Elizabeth Woodcock outlines the golden rules of home composting, and how to build in the various ingredients. Booking essential. Tickets £8

Skaill House Gardens, Sandwick

11.00 am – 12.30 pm
TEA FOR TRANSITION
More from Daniel Kenning over tea/coffee/biscuits about Transition Engineering. Today he describes the crash test: how to look at the consequences of staying on a path that’s unsustainable. Booking essential. Tickets £8

Stromness Hotel

11.30 am – 12.30 pm
DNA FOR VACCINE TARGETS HOMING IN ON EPSTEIN-BARR
The mRNA vaccine success for covid-19 highlights the potential for tackling other viruses such as Epstein-Barr. But why are some people more likely to get infected than others? Postgraduate researcher Marisa Muckian works in an Edinburgh University group aiming to use DNA to find out. Tickets £5 & £3

Phoenix Cinema, Pickaquoy
Monday 5 September

2.00 – 3.00 pm  Phoenix Cinema, Pickaquoy

**GENETIC FINDINGS WE SHOULD KNOW ABOUT**

We each differ from everyone else by about four million letters in the DNA code. But which are important for risk of disease? And which are common in Orkney? Prof Jim Flett Wilson of Edinburgh University investigates using information from the ORCADES and Viking Genes studies. **Tickets £5 & £3**

2.00 – 4.00 pm  ICIT, Robert Rendall Building, Stromness

**TRANSITION LAB TING**

A Heriot-Watt University Transition Lab is stimulating ideas to reduce children’s transport to school. The process includes a community jury called a Ting – in action today – to assess the evidence and decide. Booking recommended. **Tickets £5 & £3**.

From 3.00 pm  Peedie Kirk Hall, Palace Road, Kirkwall

**AFTERNOON TEAS**

Enjoy tea or coffee and fresh local produce, with a 10-minute story around 3.30 pm. Today Neil Price tells of the mason, the tsar, and the dry docks of Sevastopol. **Admission £8**

3.30 – 4.15 pm  ONLINE

**THE CLOCK, THE FAX AND THE CAITHNESS GENIUS**

Fax machine technology was patented in 1843 by a crofter’s son from Watten in Caithness who left school at 12. Author John Mellis tells the story of Alexander Bain.

5.15 – 6.15 pm  Orkney Theatre, Kirkwall

**TUNE THE CAT’S WHISKER TO 2LO**

It’s 100 years since the BBC’s transmissions from 2LO started public service broadcasting. Prof. Tom Stevenson tells the story of early radio and shows it in action. **Tickets £5 & £3. This event will also be livestreamed.**

7.30 – 8.30 pm  Mary Beith Lecture

Orkney Theatre, Kirkwall

**A DIFFERENT KIND OF GARDEN**

Ecological gardener Elizabeth Woodcock describes how to restore a healthy microbiome to garden soil. Ethnobotanist Anna Canning outlines linkages between soil, plants and human health. **Tickets £5 & £3**

9.00 – 9.45 pm  The Orkney Club, Harbour Street, Kirkwall

**VOYAGE TO THE FUTURE**

Are current crises taking us to where science fiction becomes reality? Back in the 1990s, Scottish science fiction writer Ken MacLeod forecast a much grittier world ahead. What does he think of today, and how does he now see the future? **Tickets £6**

9.00 – 9.45 pm  ONLINE

**Caroline Wickham-Jones Memorial Lecture**

**RISING TIDES**

Orkney’s story started with hunter-gatherers some 10,000 years ago. This discovery of a long-lost past is due in particular to Caroline-Wickham Jones. Prof. Richard Bates and Prof. Martin Bates from the Rising Tide project team describe her work, including investigations in the Bay of Firth and the Stenness and Harray Lochs.

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Tuesday 6 September

10.00 – 10.45 am  ONLINE

**TO EXTINCTION AND BEYOND**

Barry Thomson tells how the Xerces Blue butterfly and the California Condor were saved from extinction through museum genomics – using DNA from museum specimens to provide vital information on genetic identity.

11.00 am – 4.00 pm  The Gloup, Deerness

**DROP-IN: CETACEAN WATCHING**

Drop by to meet volunteers from Orkney Marine Mammal Research Initiative, to look through their telescope and hear about their work and how to identify different species. **Over-18s only. There is no charge for this event.**

11.00 am – 12.30 pm  Stromness Hotel

**TEA FOR TRANSITION**

Join Daniel Kenning for tea/coffee to hear how Transition Engineering can plan for a better future. Today: how to develop a new vision. **Booking essential. Tickets £8**
Tuesday 6 September

11.30 am – 12.30 pm
**SMALL SCHOOLS, SEAS AND FAR HORIZONS**
North Ronaldsay and Papay pupils working together to explore their island culture, on land and sea, on foot and tall ship (the Swan), with local musicians (Jen Austin and Eric Linklater) and film maker (Mark Jenkins). Tickets £5 & 3. Project supported by the North Isles Landscape Partnership Scheme.

2.00 – 3.00 pm
**MORE TREES INDEED, BUT WHERE AND HOW?**
Eoin F. Scott Lecture
We’re told more trees are needed in the Highlands and Islands to combat climate change. Siting decisions, says Prof. Roger Crofts, need careful thought to avoid past problems. Tickets £5 & 3. In association with the Royal Scottish Geographical Society

2.00 – 3.30 pm
**WORKSHOP: ORIGAMI FOR NORTHERN OCEANS**
Online
Oceanographers and artists show the Norse Sea food web from a fresh angle. Neil Banas introduces the web itself. Daša Severova shows how to fold a triangular sandeel. Peter Buchan-Symonds has a model of the lesser sandeel. Book online

From 3.00 pm
**AFTERNOON TEAS**
Peedie Kirk Hall, Palace Road, Kirkwall
Take a break for tea or coffee and fresh local produce, and a 10-minute story around 3.30 pm. Today Sarah Jane Gibbon tells of island journeys made by her grandmother, the writer Bessie Skea (‘Countrywoman’). Admission £8

3.30 – 4.30 pm
**FORENSIC SCIENCE IN PRACTICE**
Online
Join Professor Niamh Nic Daéid of the University of Dundee to hear about its applications and developments with new technology.

5.15 – 6.15 pm
**NEW LIFE FOR THE LAND AND WILDLIFE AND PEOPLE**
Orkney Theatre, Kirkwall
Derek Pretswell describes a fresh approach to regenerating the whole ecosystem of land, wildlife and people, building on ideas of earlier Scottish ecologists and the Nordic countries. Tickets £5 & 3. This event will also be livestreamed.

7.30 – 8.30 pm
**CONCERT: THE MUSIC OF THE STARS**
St Magnus Cathedral, Kirkwall
Astronomer Sir William Herschel, who died 200 years ago, was also an accomplished composer. Astronomer Dr Anne-Marie Weijmans tells his story. Elizabeth Sullivan, Valerie Webster and George McPhee play his music. Tickets £5 & 3. Supported by Loganair

9.00 – 10.00 pm
**THE HAMMARS HILL WALTZ**
The Orkney Club, Harbour Street, Kirkwall
From field recordings of renewable energy in action, Orkney musician Brian Cromarty has composed four pieces of music. Tickets £6. In association with ÖREF

9.00 – 9.45 pm
**VAVILOV’S DREAM**
The Russian biologist Nikolai Vavilov had a vision of a massive seed bank for crops to feed the planet. His team protected it through the siege of Leningrad and famine and bitter cold – as Prof. Lee Alan Dugatkin of the University of Louisville describes.

Wednesday 7 September

10.00 – 10.45 am
**DINOSAURS WITH WINGS**
Online
They were the ancestors of today’s birds, and some smaller dinosaurs had feathers, enough to fly under their own wing power, as Prof. Michael Pittman of the University of Hong Kong explains.

11.30 am – 12.30 pm
**OUR CHANGING CLIMATE: REPORTS FROM THE FRONT LINE**
Phoenix Cinema, Pickaquoy
Fire on the Amazon, fire in the Arctic, heatwaves in India, drought in California – Prof. Peter Wadhams of Cambridge University brings accounts and impacts from varied places. Tickets £5 & 3. This event will also be livestreamed.
Wednesday 7 September

1.00 – 3.15 pm

MAKING PAPER BY THE SEA
Stromness Museum

The little shingly beach by Stromness Museum is the setting for an introductory workshop with artist Lin Chau, exploring ways of producing paper using natural resources. Booking essential, tickets (including Museum visit) £16.

2.00 – 3.00 pm

TUNE IN AND UNDERSTAND
Phoenix Cinema, Pickaquoy

It happens so often in social work and mental health and elsewhere. The professionals say the people don’t understand; the people say they’re not being understood. A new strategy seeks to bring everyone together to tackle problems. It’s described by Prof. Carole Norris-Shortle, University of Maryland, and Cheryl Brown. Tickets £5 & 3. This event will also be livestreamed.

From 3.00 pm

Peedie Kirk Hall, Palace Road, Kirkwall

AFTERNOON TEAS

Meet friends over tea or coffee and fresh local produce, with a 10-minute story around 3.30 pm. Today Jon Side describes Elaine Bullard’s journeys to study and record Orkney’s plants. Admission £8

3.00 – 6.00 pm

DROP-IN: SHOREWATCH
Car park, Yesnaby

Join Whale and Dolphin Conservation to watch for whales, dolphins and porpoises. “Yesnaby is a great location for Risso’s dolphins at this time of year so call by to learn about how we can identify different individuals through photo ID. Binoculars and biscuits provided!” Over-18s only. There is no charge for this event.

3.30 – 4.15 pm

UNCERTAINTY, EDUCATION, AND THE HUMAN BRAIN
Peedie Kirk Hall, Kirkwall

ONLINE

Will artificial intelligence eventually take over all our skilled tasks? A key human ability, argues Prof. Iain Alasdair MacLeod, is to successfully manage complex uncertainty. So, he says, we must think afresh about education, which traditionally teaches us to think about known situations.

5.15 – 6.15 pm

FOLDING THE PROTEINS
Peedie Kirk Hall, Kirkwall

ONLINE

They’re everywhere in our bodies, folded into complex three-dimensional shapes, which are key to how each protein operates. Predicting the shapes seemed impossible – but as Prof. David Shortle of John Hopkins University explains, recent advances in artificial intelligence have made a breakthrough. Tickets £5 & 3

7.30 – 8.15 pm

John D. Mackay Memorial Lecture
The Orkney Club, Harbour Street, Kirkwall

HOW DO BIRDS NAVIGATE AND HOW DO PIGEONS HOME?

ONLINE

Despite more than a century of research the nature of animal navigation remains mysterious. Dr Rupert Sheldrake gives an overview of research and highlights the questions and possible experiments for answering them.

7.30 – 8.30 pm

SHACKLETON’S DRAM

ONLINE

Three cases of Highland malt whisky were found frozen into the ice beneath Shackleton’s base camp. Careful analysis has recreated the whisky, as master brewer Ken Duncan describes. Polar historian Dr Maria Pia Casarini sets the scene. Tickets £6. Over-18s only. Organised by the Institute of Brewers and Distillers.

9.00 – 10.30 pm

ZOOMING OUT

ONLINE

Join the Festival team as they sit back after intensive weeks of work on the Festival, with time for discussion and breaks to hear some music in varied style.

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Exhibitions

BRINGING THE LIGHT BACK – photos by Orkney Camera Club
Orkney Library, Kirkwall; and online at www.oisf.org

ORKNEY WIRELESS MUSEUM
From a crystal set to a valve radio, a U-boat radio, and Orkney’s first jukebox
Kiln Corner, Kirkwall

THE ROCK CYCLE (YAMAGUCHI)
Arts meets the deep time of geology in a 
Japan-Scotland collaboration
Ilana Halperin, with Naoko Mabon, Yoshihisa Nakano and Keiijro Suzuki
Pier Arts Centre, Stromness

WHEN THE GRASS DANCES – poetry and 
photography woven together around Scotland’s 
wild grasses: Valerie Gillies and Rebecca Marr
Online at www.whenthegrassdances.art

AFTER ORCADIA – photographs and words to explore how land, sea and stone 
shaped Orcadian lives in the Neolithic: Mark Edmonds and Rebecca Marr
Northlight Gallery, Stromness: 2-15 September

THE CAIRNS: LIVING IN THE LANDSCAPE
Discoveries from the South Ronaldsay site with an Iron Age broch at its heart
Stromness Museum

THE NEWARK PROJECT
Pictish, Norse and medieval remains from the Deerness coast
Orkney Museum, Tankerness House, Kirkwall

HOY TO HUDSON BAY
The story of William Sinclair Ritch from Rackwick and his 38 years in the Nor’ Wast
Hoy Heritage Centre

Wildlife walks

A special programme of walks has been put together for the Festival by Orkney 
wildlife guide Megan Taylor. It includes the great coastal walk from Yesnaby to 
Stromness, with minibus transport to Yesnaby for the start.

There’s a trip to Flotta, and a Brodgar wildlife walk, 
and other routes including Mull Head, the Burwick 
coastline, and the shores of Scapa Flow. She’ll look 
for waders and seabirds, wildflowers and insects. The 
numbers are kept to just 6 people on each, to give 
everyone a full opportunity to see and learn more 
about Orkney’s wildlife.

Full details on www.oisf.org