

BOOKING REQUEST FORM					
	£	£	No. at	No. at	Total
	Adult	Con.	adult	concess.	£ p
Sub-total from previous page	-	-	-	-	
Tuesday 10 September					
John Rae & the NW Passage	£4	£2			
The Changing Arctic	£4	£2			
Rupert of Rupertsland	£4	£2			
From Saraquoy to Cornell	£4	£2			
The Father of the Big Bang	£4	£2			
The Brewers' Craft	£5	£3			
The Terrible Taurids	£4	£2			
Bright Comet in Winter Sky	£4	£2			
Wednesday 11 September					
Miniature Whisky School	£12	-			
Light on the Water	£4	£2			
Pipefish and Pilchards	£4	£2			
Distilling - Theory and Practice	£5	£3			
Sand and Tide in the Solway	£4	£2			
Flying Far Across the Sea	£4	£2			
Shearwater	£6	£4			
Renewed, Rebuilt, Refreshed	£4	£2			
The Highland Park Ceilidh	£5	£3			
LecturePass - all £4 talks	£32	£24			

(Please note that admission can only be guaranteed if pass-holders arrive at least 15 mins before start)

Total ticket sum enclosed

Name
Address

Telephone
Email

Please send me information on travel to Orkney & accommodation

Please complete in **BLOCK CAPITALS**, post with remittance & s.a.e. to **Orkney Science Festival**
VisitOrkney, Tourist Office, Kirkwall, Orkney, KW15 1GU
Please make cheques payable to **Orkney Science Festival Ltd**

Where no ticket or booking details are entered, or admission is free, advance booking is not necessary. If capacity is limited, you may need to arrive in good time to ensure a place.

Our phone is 01343 540844, our e-mail orkneyscience@gmail.com

Book online at www.oisf.org
Follow us on Facebook and Twitter @OrkSciFest!

And remember the Molecule Hunt round the Kirkwall shops! See leaflets in the shops and on our website.

Monday 9 September

10.00 - 10.45 am **Pickaquoy Centre, Kirkwall**
DATING VIKINGS
What was happening in the Viking Age? Dr Cathy Batt of Bradford University shows how new developments in dating techniques give clues to interpret archaeological evidence across the North Atlantic.
Supported by the British Academy

11.15 am - 12.30 pm **Pickaquoy Centre, Kirkwall**
THE VIKING WORLD
The Norse era shaped Orkney in many ways. Artefacts, burials, and the marine environment are helping to picture life of that time, as Martin Carruthers, Julie Gibson, Siobhan Cook of Orkney College UHI explain.

The One O'Clock Toast at the Peedie Kirk today: writer Christina Costie, by Dr Ragnhild Ljosland

1.30 - 5.00 pm **from Palace Road, Kirkwall**
MYSTERY BUS TOUR: IN SEARCH OF THE BIG 5
What are Orkney's Big 5 wildlife species, and where can we see them? Board the bus with a team of local experts. Tickets £5 & £3.
Organised and sponsored by Scottish Natural Heritage as part of the Year of Natural Scotland

2.00 - 3.00 pm **Town Hall, Kirkwall**
THE PHYSICS OF THE ORGAN PIPE
Maarten de Vries shows how an organ pipe produces a sound, with timbre and pitch. George McPhee illustrates with Bach and Sweelinck on virtual versions of rare continental chamber organs.
Sponsored by the IET

3.30 - 4.30 pm **Town Hall, Kirkwall**
THE SOLITARY WAVE AND THE SHIP-BUILDING SCOTSMAN
Prof. Alan Champneys of Bristol University tells of John Scott Russell, who built the *Great Eastern*, raced the first America's Cup, and in 1834 discovered a solitary wave - an isolated, long-lived hump of water.
Sponsored by the Institute of Physics in Scotland

5.15 - 6.15 pm **Town Hall, Kirkwall**
BLACK HOLE, GALACTIC HEART
At the heart of most galaxies is a supermassive black hole. These are, as Prof. Bonnie Steves of Glasgow Caledonian University explains, the key to how galaxies themselves form and evolve.
Sponsored by e-availability

7.00 - 9.00 pm **The Reel, Kirkwall**
BEER ACADEMY DINNER
Join Simon Jackson, the IBD's executive director, with brewing experts Brian Eaton and Rob Hill to sample five platters of Orkney fare accompanied by selected Orkney ales and an insight into the skills of the master brewer. Over-18s only. Tickets £16 also from The Reel.
Organised by the Institute of Brewing and Distilling (IBD)

7.30 - 8.30 pm **King Street Halls, Kirkwall**
BUILDING IT UP, ATOM BY ATOM
With the scanning tunnelling microscope, we can build a substance atom by atom, molecule by molecule. Dr Peter Sloan of the University of Bath shows how it's done and the beautiful images that can result.

9.00 - 10.00 pm **King Street Halls, Kirkwall**
THE BIG SQUEEZE: PUTTING MATERIALS UNDER PRESSURE
Prof. Colin Pulham and Dr Jenny Bos of Edinburgh University describe

and demonstrate the remarkable effects of extremely high pressures. At a million times above normal air pressure, oxygen forms beautiful red crystals and then becomes metallic; graphite turns into diamond.

From 9 pm **Meet up at the Festival Club at The Reel**

Tuesday 10 September

10.00 - 11.00 am **Pickaquoy Centre, Kirkwall**
JOHN RAE AND THE NORTHWEST PASSAGE
Men sought for centuries in vain, and a key link in Roald Amundsen's eventual route was the strait discovered by John Rae, whose work was 'of incalculable value'. Arctic historian Dr Maria Pia Casarini, director of the Istituto Geografico Polare 'Silvio Zavatti', explains why.
Sponsored by the Orkney Creamery - Orkney Ice Cream

11.30 am - 12.30 pm **Pickaquoy Centre, Kirkwall**
THE CHANGING ARCTIC
With news of this year's summer ice-melt imminent, what is happening in the Arctic? And what could it mean for us? Prof. Peter Wadhams of Cambridge University, who has led over 40 polar field expeditions, describes the changes and the forces driving them.

The One O'Clock Toast at the Peedie Kirk today: Arctic explorer Dr John Rae by Janette Park

2.00 - 3.00 pm **Town Hall, Kirkwall**
Eoin F. Scott Memorial Lecture
THE REMARKABLE RUPERT OF RUPERTSLAND
Howie Firth tells of the Hudson's Bay Company's first Governor, Prince Rupert of the Rhine, a dashing cavalry commander and also a metallurgist, printmaker, and founding member of the Royal Society.
Sponsored by the Orkney Creamery - Orkney Ice Cream

3.30 - 4.30 pm **Town Hall, Kirkwall**
FROM SARAQUOY TO CORNELL
Born in Flotta 150 years ago, Sutherland Simpson worked on the farm, then left for Edinburgh to go to sea and found a job instead in a laboratory. He went on to become a leading pioneer in endocrinology and a professor at Cornell University. Patricia Long tells the story.
In association with Flotta Heritage Trust

5.15 - 6.15 pm **Earl's Palace, Kirkwall**
THE MEDIEVAL CONSTRUCTION SCIENCE SHOW
How did they build a medieval palace or cathedral? Follow a block of stone's journey to the Earl's Palace in this interactive family show. Numbers limited, booking essential. Phone the site: 01856 871918.
Presented by Historic Scotland

5.15 - 6.15 pm **King Street Halls, Kirkwall**
THE FATHER OF THE BIG BANG
The man who first suggested the universe emerged from a 'Big Bang' was a physicist and a Catholic priest. Revd Dr Gareth Leyshon from Cardiff, who is himself an astrophysicist and a parish priest, tells the story of the remarkable Monsignor Georges Lemaître.
Sponsored by the Institute of Physics in Scotland

7.30 - 8.30 pm **Supper Room, Town Hall, Kirkwall**
THE BREWERS' CRAFT
Craft brewing is growing, as small companies build up products using traditional skills and modern science, and often locally-grown materials. What are the keys to success? Speakers from several northern craft breweries discuss. Over-18s only. Tickets £5 & £3.
Organised by the Institute of Brewing and Distilling

7.30 - 8.30 pm **King Street Halls, Kirkwall**
THE TERRIBLE TAURIDS
Some 13,000 years ago the Earth suddenly cooled and the ice-melt went into reverse. A possible cause, says Prof. Bill Napier, was an encounter with a trail of material from a large disintegrating comet. The remnants continue today as the Taurid meteor streams.
Sponsored by the Institute of Physics in Scotland

9.00 - 10.00 pm **King Street Halls, Kirkwall**
Archie E. Roy Memorial Lecture
THE BRIGHT COMET IN THIS WINTER'S SKY
It's heading our way - but will it shine bright or fade in the heat of the Sun? Prof. Bonnie Steves of Glasgow Caledonian University describes Comet ISON and what we may learn from it.

From 9 pm **Meet up at the Festival Club at The Reel**

Wednesday 11 September

9.30 am - 12.30 pm **Highland Park Distillery, Kirkwall**
Miniature Whisky School: BARLEY TO CLEARIC TO BROONIC
How does the whisky-making process shape quality, composition and flavour? Insights from Dr Frances Jack of the Scotch Whisky Research Institute and Brian Eaton of the IBD. Numbers limited to 15 people. Advance booking essential (over-18s only). Tickets £12.
Organised by the Institute of Brewing and Distilling

10.00 - 11.00 am **Town Hall, Kirkwall**
LIGHT ON THE WATER
Short films and beautiful images, including the first showing of a new film on beremeal and the Barony Mills (James Stead), comets and auroras over Caithness (Maciej Winiarczyk), Raymond Besant's film of cormorant courtship and John Leith's panoramic photography.

11.30 am - 12.30 pm **Town Hall, Kirkwall**
PIPEFISH AND PILCHARDS, ANCHOVIES AND MULLET
Changing sea conditions are bringing new fish, some through the Atlantic, others via the North Sea. Prof. Jon Side of ICIT Stromness describes the changing biodiversity of Orkney waters.

The One O'Clock Toast at the Peedie Kirk today: William Balfour Baikie, explorer of the Niger, by Sheila Garson

2.00 - 5.00 pm **from Palace Road, Kirkwall**
BUS TOUR: DISTILLING - THE THEORY AND PRACTICE
A unique opportunity to join experts from Scapa and Highland Park for special tours of both. Advance booking essential: over-18s only. Tickets £5 & £3. Free to IBD members and industry staff.
Organised by the Institute of Brewing and Distilling & sponsored by Highland Park and Scapa Distilleries and Maynes Coaches

2.00 - 3.00 pm **Town Hall, Kirkwall**
SAND AND TIDE IN THE SOLWAY
Novelist and scientist Ann Lingard, author of Solway Shore Stories, shows the interplay of biology, geology, people and tide along the shores of the Firth where she lives.

3.30 - 4.30 pm **Town Hall, Kirkwall**
FLYING FAR ACROSS THE SEA
With various seabird species under threat, a new study uses satellite-linked tracking devices to follow birds and find where they feed with, as Andy Knight of RSPB Orkney reports, some surprising discoveries.

5.00 - 7.00 pm **Town Hall, Kirkwall**
SHEARWATER: TALES OF SEABIRDS AND HUMANS
Music and stories combining different journeys: migrating birds, a young man's coming of age, a gull-woman, and a mythical love affair with the northern lights. A family entertainment whose background is the very real threat today to the survival of seabirds. Tickets £6 & £4

7.30 - 8.30 pm **Supper Room, Town Hall, Kirkwall**
RENEWED, REBUILT, REFRESHED
With global demand, old distilleries are being reopened, and new ones built. Hear of the rebirth of Benromach from manager Keith Cruickshank and of the new Tullamore distillery in Ireland from Jane Millar of William Grant & Sons. Over-18s only. Free to IBD members and industry staff.
Organised by the Institute of Brewing and Distilling

8.00 pm - 12.00 midnight **Peedie Kirk Hall, Kirkwall**
THE HIGHLAND PARK CEILIDH
with Dave and company, traditional dancing, and suppers of local fare available. Tickets £5 & £3.
Sponsored by Highland Park

Special food events during Festival

Daily, from Fri 6 to Wed 11. Lunches in the Peedie Kirk Hall. Soup and Orkney fare daily, £6. From 12.30 pm, with 5-minute toast at 1pm.
Sponsored by Highland Park

Special Festival exhibitions (see www.oisf.org for more)

EXPLORING THE ISLANDS - scenes from the North and South Isles. Orkney Camera Club photographs at Pickaquoy Centre.

ORKNEY'S BIG 5 - iconic wildlife at Pickaquoy, displayed by SNH.

NORTH AND SOUTH: NOTES FROM A CHANGING PLANET - Antarctic & Arctic drawings by John Kelly. Orkney Museum, Kirkwall

OPEN WINDOWS - Rae-inspired pictures along the Stromness street.

FROM ORKNEY TO CANADA - John Rae's favourite places, Jane Glue and Sheena Fraser McGoogan, Jane Glue Gallery, Finstown.

BETWEEN TIDES - sea watching in weave and stone: Ros Bryant and Janet Clark, Northlight Gallery, Stromness.

MOVING FORWARD FROM ASH DIEBACK - Town Hall, Kirkwall.










Thursday 5 September

12.00 - 1.30 pm *Town Hall, Kirkwall*
Opening lunchtime-lecture: GREENLAND'S ICE GIANTS
 In a spectacular and highly active landscape, Dr Richard Bates of St Andrews University tackles the challenges of recording Greenland's melting glaciers. Introduced by filmmaker Alan Ereira, who opens the Festival at 12 noon; and including a light lunch of local fare.

2.00 - 3.00 pm *Town Hall, Kirkwall*
LIFE IN THE DARK AND THE DEEP
 The depths of the oceans are exotic places, with strange terrain, from sea mounts and cold-water corals to volcanic vents and hot springs. And remarkably, as Prof. Alex Rogers of Oxford University explains, they teem with an astonishing diversity of life.

Sponsored by Pentland Ferries

3.45 - 4.45 pm *Pickaquooy Centre, Kirkwall*
THE LAST OF THE GREAT AUKS
 Agile in water but flightless and clumsy on land, Britain's last breeding pair were killed in Papay 200 years ago. Conservationist Tim Dodman tells the story, and filmmaker Brian McClave from Site-Eye Time-Lapse Films introduces time-lapse and 3D techniques applied in filming and creating a virtual 3D great auk and capturing life on the island today.
Supported by OIC Culture Fund & Papa Westray Community Council

5.15 - 7.00 pm *Pickaquooy Centre, Kirkwall*
FROM THE HEART OF THE WORLD: THE ELDER BROTHERS' WARNING
 Alan Ereira introduces the film he was asked to make by the Kogi people, regarded as the last surviving pre-Colombian civilization. He visited their mountain homeland, to learn of their concern for the natural world and the danger ahead if it is not respected. Admission free: book direct from Pickaquooy Centre www.pickaquooy.net from 26 August.

7.30 - 9.30 pm *Pickaquooy Centre, Kirkwall*
ALUNA THE MOVIE
 Alan Ereira's new film, shaped by the Kogi themselves, takes their message further to open a dialogue with Western scientists. Afterwards he is joined by one of the scientists in the film, conservation biologist Prof. Alex Rogers, for questions and discussion. Special showing, admission free, book direct from www.pickaquooy.net from 26 August.

7.30 - 9.00 pm *St Magnus Church, Birsay*
AN ORKNEY NIGHT - MY ISLAND HOME
 Songs by Allie Windwick and others, humorous poems by Robert Rendall, Orkney tunes with local connections, and some of Orkney's finest performers. Harvey Johnston comperes.
Admission by donation - proceeds to St Magnus Church Birsay Trust

7.30 - 9.00 pm *Town Hall, Kirkwall*
ISLAND FERRY OPTIONS
 What are the requirements for North and South Isles ferry services? What technology is available to meet these challenges? Brian Archibald of Orkney Ferries, Prof. Alf Baird of Edinburgh Napier University, and Stuart Ballantyne of Sea Transport Solutions. Followed by launch in The Reel of Roy Pedersen's new book, *Who Pays the Ferryman*.

From 9 pm Meet up at the Festival Club at The Reel

Friday 6 September

10.00 - 11.00 am *King Street Halls, Kirkwall*
EUROPE'S LOST WORLD
 A picture of Doggerland, 15,000 years ago a landscape of trees and animals and now beneath the North Sea. Dr Richard Bates (St Andrews University), Dr Martin Bates (University of Wales), and Prof. Vince Gaffney (Birmingham University) describe the latest studies.

11.30 am - 12.30 pm *King Street Halls, Kirkwall*
THE PEOPLE OF THE DROWNED LANDS
 The search for clues to the people of the lost land of Doggerland. Dr Eugene Ch'ng (Birmingham University) explains techniques. Caroline Wickham-Jones (Aberdeen University) and Dr Sue Dawson (Dundee University) report on the ongoing work around Orkney's coasts.

The One O'Clock Toast at the Peedie Kirk today: archaeologist Daphne Lorimer, by Patricia Long

2.00 - 3.00 pm *King Street Halls, Kirkwall*
FROM AXIOMS TO THE AXUM REEL
 With his wife Joan, Prof. Tom Flett recorded and preserved many traditional dances in Orkney and elsewhere. He was also one of the UK's leading mathematicians. His daughters Lindsay Smith and Jane Harrison tell the story of a remarkable man and a wealth of tradition.

3.30 - 4.30 pm *King Street Halls, Kirkwall*
THE SECRET MATHS OF TWISTING, BRAIDING AND DANCING
 Can the patterns of a dance be looked at mathematically? Dr Julia Collins from Edinburgh University introduces three kinds of dance, the mathematics behind them and surprising applications to technology.
Sponsored by Loganair

5.15 - 6.15 pm *King Street Halls, Kirkwall*
SO WHAT'S REALLY GOING ON?
 Why does a plane fly? How is it that...? It turns out that commonly held impressions of how science works are not always quite right. Join Prof. Mike Gore and Prof. Sue Stockmayer from the Australian National University and Dr Ken Skeldon from Aberdeen University for a fast paced hour of fascinating, interactive science for all!

7.30 - 8.30 pm *Town Hall, Kirkwall*
THE THORFINN AND THE HURRICANE
 60 years ago the *Earl Thorfinn* made an epic journey to Aberdeen, running before a hurricane. How has marine communication developed over the years to help in such situations? Prof. Tom Stevenson, Dorothy Brankin of the Museum of Communication, Burntisland, and Sandy Firth of Orkney Wireless Museum, tell the story.

9.00 - 10.00 pm *Town Hall, Kirkwall*
10 YEARS OF WAVE AND TIDE
 The world's first and only centre for marine energy open-sea testing is 10 years old. EMEC is attracting to Orkney waters the leading edge of marine energy technology. Managing director Neil Kermode, joined by representatives of several companies working in Orkney waters, looks ahead to the challenges and opportunities of the next 10 years.
Hosted by OREF

From 9 pm Meet up at the Festival Club at The Reel

Island events (see www.oisf.org for full details)

Friday night, Hoy Kirk: 5.45 pm ferry from Stromness for astronomy talks and photos by Maarten de Vries and Gareth Leyshon, stargazing (weather permitting), soup and bannocks (free) - and back by 10.30!
Saturday night, North Ronaldsay: How the island became part of wireless history. Prof. Tom Stevenson, Dorothy Brankin, Sandy Firth.
Saturday night, Gable End Theatre, Lyness - Alan Ereira films, from Colombia's Sierra Nevada and the people of a lost city.
Shearwater - Thurs 12 **Gable End**, Fri 13 **Sanday**, Sat 14 **Papay**

Saturday 7 September

10.00 am - 4.00 pm *King Street Halls, Kirkwall*
FAMILY DAY - DON'T MISS THIS!

Europe's lost world: explore the drowned landscape of Doggerland. Meet the scientists, look through the microscope at clues from the seabed, and try some stone age technology. Get the latest news on wave and tidal power. Study life in the sea.
 Handle a meteorite and steer a Mars Rover. Learn about astronomy. Touch the past with Orkney's ancient artefacts and new 3D technologies. Play the banana piano. Join the Dustbin Detectives and the Viking soap carvers - and cast Thor's hammer in chocolate.
 Try the many SCI-FUN activities. Practice your flying and see life on an oil platform. Try jigsaws and colouring, play with scrap. Make model molecules, try the puzzle challenge. Knit a hyperbolic mushroom, crochet a Fibonacci flower. Make bug homes and look at minibeasts. Roasted salmon baps available at lunchtime, and ice cream with rhubarb & ginger. And all these activities for just £4 & £2 for the day!
Sponsored by many kind people and lively organisations

10.00 - 11.00 am *Town Hall, Kirkwall*
The John D. Mackay Memorial Lecture
YOU JIST HIV TAE LAUGH BEUY

What is Orkney humour? And how does dialect affect it? Dr Tom Rendall, whose interest in study developed through evening classes given by the late John D. Mackay himself, dips into sources past and present to look deeper at some elements of the Orkney character.

11.30 am - 12.30 pm *Town Hall, Kirkwall*
The Grimond Lecture
ANCIENT BREEDS, LIVING HISTORY

What can we learn from ancient breeds of sheep and their genes? Hear about two unique breeds, the Herdwicks on the Cumbrian fells and the shore-living North Ronaldsay sheep. Zoologist Dr Ann Lackie (writer Ann Lingard) and biochemist Dr June Morris, who both keep native sheep, explore origins and outline challenges and opportunities.
In association with the Rare Breeds Survival Trust

The One O'Clock Toast at the Peedie Kirk today: photographer and musician Dougie Shearer, by Ken Ross

1.00 - 4.00 pm *Broad Street, Kirkwall*
VINTAGE RALLY

Orkney Vintage Club with cars, motorbikes, tractors and stationary engines, a tractor run setting off at 1.30 pm plus the Willowburn Valley Stompers and later and later the Ghanaian drummers Kakatsitsi.

2.00 pm - 3.00 pm *Town Hall, Kirkwall*
SINGALONG WITH MR BOOM
 His rocket's quick like the A9 to Wick!
Sponsored by Talisman Sinopec Energy UK Limited

2.00 pm - 3.00 pm *Nautical School, Stromness*
THE MATHEMATICS OF KNOTS
 Two worlds collide as we explore how mathematicians and sailors approach the rich and beautiful world of knots. Dr Julia Collins explains the maths, while Mark Shiner ties the knots. Booking needed. £5 & £3.

3.30 pm - 4.30 pm *Nautical School, Stromness*
MAKING WAVES

Prof. Clive Greated shows what happens in the sea and in Edinburgh University's massive new Flowave tank. The tank's manager, Stuart Brown, shows the first pictures of it in action, and William Annal of Scotrenewables sets the scene. Booking needed. £5 & £3.
Sponsored by Clark Thomson Insurance

4.15 - 5.15 pm *Town Hall, Kirkwall*
ZOMBIE SCIENCE: WORST CASE SCENARIO
 A spoof tutorial from theoretical Zombiologist Doctor Smith. Putting you at the heart of a hypothetical (we hope) Zombieism outbreak, he'll help you learn how to deal with it. With a multi-media presentation, practical demonstrations and audience participation. Suitable for ages 13+.
Supported by the Wellcome Trust and University of Glasgow

5.45 - 6.45 p *Town Hall, Kirkwall*
COSMIC ROULETTE
 Life on earth has seen huge upheavals, and at times mass extinctions. The causes, says Prof. Bill Napier of the University of Buckingham, are on a cosmic scale involving impacts, giant comets, and supernovae.
Sponsored by the Institute of Physics in Scotland

7.00 - 7.30 pm *Broad Street, Kirkwall*
KIRKWALL CITY PIPE BAND
 with their final parade of the season.

8.00 pm - 12.00 midnight *Town Hall, Kirkwall*
THE ISLAND CEILIDH
 With music by Hullion, some classic old Orkney dances, help from Jessie Stuart, Lindsay Smith & Jane Harrison clog dancing, and Mr Boom around 9 pm. Suppers of local fare available. Tickets £5 & £3.
Sponsored by Orkney Car Hire - James D Peace & Co

8.00 - 10.00 pm *King Street Halls, Kirkwall*
KAKATSITSI IN CONCERT
 The master drummers are back, this time with two new dancers to join the music and song, carrying with them to sunshine and sea air from the fishing community of Jamestown, Accra. Tickets £10.
Sponsored by Pentland Ferries

8.00 - 10.00 pm *King Street Halls, Kirkwall*
WEST SIDE CINEMA: CHASING ICE
 Stunning images of a changing world of ice mountains and frozen seas. One man's quest to show the effect of forces at work on a planetary scale. One of the great documentaries of our time. Doors open 7.30 pm. Tickets on the door £5 & £3 (under 16). Certificate 12A.

Sunday 8 September

11.15 am - 12.15 pm *St Magnus Cathedral*
SCIENCE FESTIVAL SERVICE
 conducted by Revd. Fraser Macnaughton. Guest Preacher Revd Dr Gareth Leyshon, parish priest in Cardiff with a doctorate in astrophysics, and St Magnus Cathedral Choir.

11.30 am - 12.30 pm *Pier Arts Centre, Stromness*
WRITING THE WORLD
 How does the world around us shape a writer? Pippa Goldschmidt used to be an astronomer and has published a novel, short stories and poetry inspired by this science. Lisa Matthews is a poet who writes about the sea, and the natural and man-made objects in it.

One O'Clock Toast at Peedie Kirk today: aviation pioneer Capt. E.E. Fresson, by Capt. Colin McAllister of Loganair

1.30 - 5.00 pm *from Palace Road, Kirkwall*
10,000 YEARS OF ORKNEY'S WILDLIFE
 Board the bus for Burray and South Ronaldsay, with local naturalist Julian Branscombe pointing out wildlife en route. We'll also visit the Fossil and Heritage Centre to see the *Building of the Barriers* exhibition and have a special mini-tour of the Tomb of the Eagles visitor centre, with its new Mesolithic Orkney room. Tickets £7 & £5.
Organised by Orkney Nature Festival. Sponsored by Stagecoach

2.00 - 3.30 pm *Pier Arts Centre, Stromness*
I WISH YOU WERE HERE WITH US NOW
 From Canada's Hudson Bay, Letitia Hargrave's many letters home to Scotland provide, as Morag MacInnes describes, a vivid picture of the lives of company staff, native people, and interesting visitors such as John Rae. Rose Pipes introduces. Booking needed. Tickets £5 & £3.

3.30 - 4.30 pm *Pier Arts Centre, Stromness*
SOLWAY SHORE STORIES
 Shrimpers and sand-banks, the drifting rain over the saltmarshes, and the surge of the tide through the seaweed. Novelist and scientist Ann Lingard with stories of the Solway shore, images of sea and sand, and music by Seona Dunsmuir. Booking needed. Tickets £5 & £3.

6.00 - 7.15 pm *Skaill House, Sandwick*
Dr John Cumming Memorial Lecture
THE FLOWERS THAT FOLLOWED FLODDEN
 Many able men died at Flodden, 500 years ago tomorrow, but the Scottish Renaissance started by King James IV lived on after him and flowered with poets and philosophers. Douglas Blane and Howie Firth tell the story, Sarah Jane Gibbon sings and Liz Ashworth provides a 16th-century tea to follow. Booking needed. Tickets £6 & £4.
With the support of The Cuminga Trust

8.00 - 9.30 pm *St Magnus Cathedral, Kirkwall*
TO THE LAND OF ICE AND LIGHT
 The Mayfield Singers and Paisley Abbey organist George McPhee on a journey of Arctic exploration with works by northern composers. Dave Grieve reads from the journals of the travels of John Rae.
Sponsored by Loganair

From 9 pm Meet up at the Festival Club at The Reel

BOOKING REQUEST FORM

	£ Adult	£ Con.	No. at adult	No. at concess.	Total £	p
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Thursday 5 September						
Greenland's Ice Giants	£4	£2				
The Last of the Great Auks	£4	£2				
Life in the Dark and Deep	£4	£2				
Island Ferry Options	£4	£2				

Friday 6 September						
Europe's Lost World	£4	£2				
People of Drowned Lands	£4	£2				
Axiomatics to Axum Reel	£4	£2				
Secret Maths of Dancing	£4	£2				
So What's Really Going On?	£4	£2				
Thorfinn and Hurricane	£4	£2				
10 Years of Wave and Tide	£4	£2				

Saturday 7 September						
You Jist Hiv Tae Laugh	£4	£2				
Ancient Breeds	£4	£2				
Singalong with Mr Boom	£4	£2				
Mathematics of Knots	£5	£3				
Making Waves	£5	£3				
Zombie Science	£4	£2				
Cosmic Roulette	£4	£2				
The Island Ceilidh	£5	£3				
Kakatsitsi in Concert	£10	-				

Sunday 8 September						
Writing the World	£4	£2				
10,000 Years Wildlife	£7	£5				
Wish You Were Here Now	£5	£3				
Solway Shore Stories	£5	£3				
Flowers Followed Flodden	£6	£4				
To the Land of Ice and Light	£4	£2				

Monday 9 September						
Dating Vikings	£4	£2				
The Viking World	£4	£2				
Mystery Bus Tour: Big 5	£5	£3				
Physics of the Organ Pipe	£4	£2				
Solitary Wave	£4	£2				
Black Hole, Galactic Heart	£4	£2				
Beer Academy Dinner	£16	-				
Build it up, Atom by Atom	£4	£2				
The Big Squeeze	£4	£2				

continued overleaf
Look for updates on our website www.oisf.org

Disclaimer: Orkney International Science Festival reserves the right to alter, amend or cancel the contents of this programme at its discretion or as circumstances may necessitate.