

BOOKING REQUEST FORM

	£ Adult	£ Con.	No. at adult	No. at concess	Total £	p
Tuesday 7 September						
Science of Toys of Thailand	£4	£2				
A True Master	£4	£2				
The Science of Coincidence	£4	£2				
Time as a River or a Sea?	£4	£2				
Probing Einstein's Universe	£4	£2				
Willow Wood for Warmth	£4	£2				
Corncrakes and Bumblebees	£4	£2				
Wednesday 8 September						
Miniature Whisky School	£12	-				
Learning about Animal Sounds	£4	£2				
Films: Time's Flight and Flow	£4	£2				
Distilling - Theory and Practice	£5	£3				
Goustiers and Skreevers	£4	£2				
Bringing in the Sheaves	£4	£2				
Orkney and The Royal Society	£4	£2				
A Copper-Bottomed Product	£4	£2				
The Highland Park Ceilidh	£5	£3				

£32 Lecturepass - all £4 talks

(Please note that admission can only be guaranteed if passholders arrive at least 5 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 International Science Festival
 Visit Orkney, Tourist Office, Kirkwall, Orkney, KW15 1NX

Where no ticket or booking details are entered, advance booking is not necessary, and admission at the door will be £4 Adults & £2 Concessions, unless otherwise specified.

Please make cheques payable to Orkney Science Festival Ltd.

Our phone is 01343 540844, our e-mail science@orkney.com

Look out for programme updates on our website
www.oisf.org

5.15 - 6.30 pm

King Street Hall, Kirkwall

POWER FROM WAVE AND TIDE

Latest news on progress is given by Neil Kermode of the European Marine Energy Centre EMEC, Neil Davidson from Aquamarine Power whose Oyster system is being tested at Billia Croo, John Stevenson of Pelamis Wave Power whose P2 machine has arrived for trials, and William Annal of Scotrenewables who are moving on to the construction of a full-scale prototype of their tidal device.

Hosted by the Institution of Civil Engineers

7.30 - 9.30 pm

Kirkwall Sheriff Court

MURDER, MYSTERY & MICROSCOPES

Forensics experts from the Macaulay Land Use Research Institute delve into the science behind crime fiction. Ann Cleeves, award-winning author of crime series The Shetland Quartet and the forthcoming Vera Stanhope series on ITV, sets the scene. The challenge is tackled by world-renowned forensics expert Prof. Dave Barclay; Dr James Grieve, Police Forensic Pathologist for the North East and Grampian; and Dr Lorna Dawson, Head of the Macaulay Institute's Soil Forensic team.

Numbers limited: booking essential. £5 & £3.

Supported by the Scottish Government and the Macaulay Institute

Pier Arts Centre, Stromness. 7.30: Broad Bay and Jubilee An Orkney yole and a Western Isles skiff: Colin Myers, shipwright, sailor, photographer. **9.00: Galapagos Conservation Conflicts.** Dr Kate Johnson of ICIT on science, politics and nationalism. Admission free, at door.

Tuesday 7 September

10.00 - 11.00 am

Pickaquooy Centre, Kirkwall

THE SCIENCE OF THE TOYS OF THAILAND

Khun Thanakorn Palachai of Thailand's National Science Museum brings out some traditional toys from Thailand, and demonstrates the science behind them - and provides an opportunity for you to play with some of them yourself!

11.30 am - 12.30 pm

Pickaquooy Centre, Kirkwall

A TRUE MASTER

D'Arcy Thompson, born 150 years ago, was one of the greatest biologists of his generation, expert also in classics and mathematics. His pioneering book, *On Growth and Form*, reveals the mathematical patterns in the growth of sunflower heads or seashells; it greatly influenced Robert Rendall. A later holder of the same chair of natural history at St Andrews University, Prof. Peter Slater, tells the story of the man, and Howie Firth describes the significance of the mathematics.

Sponsored by Cranit Dairy

The One O'Clock Toast at the Peedie Kirk today: poet and shell expert Robert Rendall by Dr Simon W. Hall

2.00 - 3.00 pm

Pickaquooy Centre, Kirkwall

THE SCIENCE OF COINCIDENCE

In 1930 a longlasting collaboration began between the physicist Wolfgang Pauli, one of the founders of quantum theory, and the psychoanalyst Carl Gustav Jung. Jung analysed Pauli's dreams and Pauli contributed to Jung's concept of synchronicity - how events sometimes seem to coincide. Marita Lück tells how two men from very different backgrounds came together to explore unknown territory.

3.30 - 4.30 pm

Pickaquooy Centre, Kirkwall

TIME AS A RIVER, OR TIME AS A SEA?

Is time like a river, flowing from the past? One idea in quantum theory is that it may also flow from the future; another that it is like a sea, with two dimensions. Howie Firth introduces some of the new ideas, their links to the nature of light and of order, and how they may open the way to a bigger picture uniting quantum theory and relativity.

Sponsored by the Institute of Physics

5.15 - 6.15 pm

King Street Hall, Kirkwall

PROBING THE DARK SIDE OF EINSTEIN'S UNIVERSE

Gravitational waves, the ripples in spacetime predicted by Einstein's theory of general relativity, are produced by some of the most violent and energetic phenomena in the universe, including black holes, neutron stars and supernovae. Dr Martin Hendry of Glasgow University explains what discovery of gravitational waves could mean for attempts to understand the mysteries of dark matter and dark energy.

Sponsored by the Royal Society of Edinburgh

7.30 - 8.30 pm

King Street Hall, Kirkwall

WILLOW WOOD, WASTE, AND WARMTH IN WINTER

They grow quickly, can be cut regularly, and can clean effluent - and in Northern Ireland they're heating colleges, swimming pools and council offices. Dr Alistair McCracken of the Agri-Food and Biosciences Institute in Belfast describes a new source of farm income and environmental benefit. There's time afterwards, over some Orkney grain supper snacks, to find out more about opportunities.

Sponsored by UHI HI Links

9.00 - 10.00 pm

King Street Hall, Kirkwall

CORNCRAKES AND BUMBLEBEES

Have you heard a corncrake this year? Or seen a Great Yellow Bumblebee? Andy Knight, the RSPB's Reserves Manager in Orkney, describes how the farmed environment is helping to sustain the future of these native birds and bees.

Wednesday 8 September

9.30 am - 12.30 pm

Highland Park Distillery, Kirkwall

ROBERT, RUSSELL AND TIM'S MINIATURE WHISKY SCHOOL

Where do the qualities come from in malt whisky? The hint of honey, or sea salt, or vanilla? From the water, the still or the barrel? A unique opportunity to sit down with three industry experts - Robert Fotheringham, Russell Anderson and Tim Dolan - and find out at first hand about the underlying chemistry and stages of production.

Numbers limited to 10 people.

Advance booking essential (over-18s only). Tickets £12.

Organised by the Institute of Brewing and Distilling

11.00 - 11.00 am

Pickaquooy Centre, Kirkwall

LEARNING ABOUT SOUNDS IN ANIMALS

Parrots and hummingbirds, seals and dolphins: they all - like us - learn some of the sounds they produce. They also learn to use them in particular ways and to understand what they mean. How have these systems developed, and how much do we know about them? Prof. Peter Slater of St Andrews University describes recent research, including studies of grey seal calls and of bird song.

Sponsored by e-availability

11.30 am - 12.45 pm

Pickaquooy Centre, Kirkwall

FILM MORNING: TIME'S FLIGHT AND FLOW

Raymond Besant's award-winning film on the fulmar, The Flying Dustbin. Three classic films by Margaret Tait: Aerial, The Drift Back, Land Makar. Selena Kuzman's new video The Watermill.

In association with the Pier Arts Centre

The One O'Clock Toast at the Peedie Kirk today: food writer and folklorist F. Marian McNeill by Liz Ashworth

2.00 - 5.00 pm

from Palace Road, Kirkwall

BUS TOUR: DISTILLING - THE THEORY AND PRACTICE

Join distillery managers Alan Winchester of Scapa and Russell Anderson of Highland Park for an introduction to distilling and special tours of the two distilleries. See stills, study samples at first hand. **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

Pickaquooy Centre, Kirkwall

GOUSTERS AND SKREEVERS

Orkney dialect has words to cope with the worst of weather - including blizzards and hurricanes, as those of the 1950s. Tom Rendall of Orkney College UHI gives examples, archive material, dialect poetry.

Sponsored by Pentland Ferries

3.30 - 4.30 pm

Pickaquooy Centre, Kirkwall

BRINGING IN THE SHEAVES

It was the time in the Orkney calendar when everyone had to work together to make sure they had food for the winter. Sarah De Rees of Orkney College UHI looks at the old Orkney harvest, crops and work, traditions and meaning - with oatcakes and bannocks to follow.

Sponsored by Cranit Dairy

5.15 - 6.15 pm

King Street Hall, Kirkwall

The John D. Mackay Memorial Lecture

ORKNEY AND THE ROYAL SOCIETY

Amongst the Fellows of the Royal Society, in its 350 years, have been several Orcadians, including Murdoch Mackenzie and John Rae. Dr Peter Collins, Director of the Society's Centre for History of Science, outlines the history of the Royal Society and discusses these and other Orcadians whose names are in the Society's archives.

Sponsored by The Royal Society

7.30 - 9.00 pm

The Girnel, Kirkwall

A COPPER-BOTTOMED PRODUCT

Alan Winchester, Distilling Manager of Chivas Brothers, and Robert Fotheringham, the company's Chief Chemist, on what makes Scotch whisky Scotch whisky, and the part played by the copper of the stills - with samples to help you make up your own mind.

Over-18s only. Free to IBD members and industry staff.

Organised by the Institute of Brewing and Distilling

8.00 pm - 12.00 midnight

Ayre Hotel, Kirkwall

THE HIGHLAND PARK CEILIDH

with Dave and company, traditional dancing, and Golden Slipper suppers available - Sunjoy and hot pie cold! **Tickets £5 & £3**

Sponsored by Highland Park

Special food events during Festival

Thurs 2 & Fri 3. Highland Park Old Orkney Banquet at Foveran. Fresh local fare from land and sea, traditionally cooked and served with an interesting glass or two. Appetising details on www.oisf.org. Bookings from Hotel: 01856 872389.

Daily, from Fri 3 to Wed 8. The Biggest Peedie Lunches - in the Peedie Kirk Hall. Soup and Orkney fare every day for £6. From 12.30 pm, with a 5-minute toast at 1 pm to an appropriate Orkney figure.

Sun 5. Traditional Orkney High Teas. Firth Community Centre, Finstown, 4-6 pm. £9 adults, £5 under-12s.

Every day. Westray Crab lunches at Lynnfield Hotel. Fresh crab with traditional bere bannocks. Book from Hotel: 01856 872505.

Fri 10. George Mackay Brown Evening. Traditional Orkney fare and entertainment. Peedie Kirk Hall. Tickets £10: Stevenson's, Rae's.

Sun 12. Westray Food Journeys with Liz Ashworth. Updates on venues, times and bookings on www.oisf.org.

Sun 12. Lux Dinner at Lynnfield Hotel. Details from Hotel: 872505.

Special island events (and see www.oisf.org)

Fri 3 - Sun 5. Stronsay Green Festival. Drama on Fri evening, craft workshops and local food on Sat & Sun. Sat 11: Kids Bushcraft day. More details from Marion Macleod on 01857 616 354 or 07919 550 943.

Sat 5. Gable End Theatre, Lyness. 7.30. The Archaeology of Hoy and Walls & recent excavations - Dan Lee, Orkney College UHI. The Everlasting Battle, an old Norse tale from Hoy - Dr Karen Bek-Pedersen, Aberdeen University. Organised by Scapa Flow LPS.

Special Festival exhibitions (more on www.oisf.org)

Pickaquooy Centre, Kirkwall

ENLIGHTENMENT

Photographs inspired by the work of six world-class Scottish research institutes, taken by David McIntyre for the *knowledgescotland* initiative. Flowers and lichens, crops and cattle, and rare breeds such as the North Ronaldsay sheep. Sponsored by the Scottish Government, RERAD and Moredun Research Institute.

ON WINGS AND WHEELS AND ISLAND WAVES

Photographs of Orkney transport by Orkney Camera Club.

NIGHT SKIES IN NORTH RONALDSAY

Photographs from a competition organised with North Ronaldsay Community Association. Sponsored by W.H.B. Sutherland Ltd

Orkney Library & Archive, Kirkwall

Daily except Sun

ORKNEY EXPLORERS - JOURNEYS FOR IDEAS AND PLACES

Travellers T.S. Traill and John Rae, mapmaker Murdoch Mackenzie, and explorers of ideas in an Orkney setting: Robert Rendall, Magnus Spence, F. Marian McNeill, Mary Brunton.



digital painting and design by selena s. kuzman

Thursday 2 September

12.00 - 1.30 pm *St Magnus Centre, Kirkwall*

OFFICIAL OPENING

by Johnny Grimond, writer-at-large for The Economist, who introduces a new Orkney product buffet followed by **The Grimond Lecture:**

RUNNING TO THE LIMIT: EXPLORING THE FRONTIERS OF HUMAN PERFORMANCE

How can you run 1000 miles in a fortnight? How to prepare to push body and mind to the absolute limit? World record-holder William Sichel discusses the science behind ultra-endurance sport - physiology, nutrition, adaptation and understanding psychological factors.

Sponsored by Loganair

2.00 - 3.00 pm *St Magnus Centre, Kirkwall*

THE FRANKLINS DOWN UNDER

Before Sir John Franklin's ill-fated search for the North-West Passage he was Governor of Van Diemen's Land in Australia. Lady Jane helped her husband bring about reforms and also made her own journeys of exploration. Mike Gore and Sue Stockmayer take up the story.

3.30 - 4.30 pm *St Magnus Centre, Kirkwall*

ORKNEY AND THE PICTS

Where did the Picts come from? A very early English scientist knew. Bede - familiar as a historian - wrote of volcanoes, the earth's shape, the moon's phases - and the Picts' route to Britain. Howie Firth follows the implications to provide a radical new picture of the Picts.

Sponsored by Crantit Dairy

5.15 - 6.15 pm *St Magnus Centre, Kirkwall*

THE HUNTER TAKES A FARM

Farming's arrival in Britain 6000 years ago meant a new relationship with nature - shaping it and changing it. The effects, says archaeologist Caroline Wickham-Jones, shaped us deeply; to study them may help solve problems of today's world, such as managing resources. The launch follows of her new book, *Fear of Farming*.

7.30 - 9.00 pm *St Magnus Church, Birsay*

AN ORKNEY NIGHT

Catch the mood of an old Orkney concert. Songs, music and stories from a cast from Birsay and beyond, compered by Harvey Johnston.

Admission by donation - proceeds to St Magnus Church Birsay Trust

Friday 3 September

UHI Science Day

10.00 - 11.00 am *Pickaquooy Centre, Kirkwall*

THE MOST IMPORTANT PROCESS ON THE PLANET

The ultimate energy source for life on earth is the sun. As part of a schools science collaboration with UHI, Dr Paul Beaumont of the Scottish Schools Equipment Research Centre explains the plant-building process of photosynthesis - with colourful demonstrations.

11.30 am - 12.30 pm *Pickaquooy Centre, Kirkwall*

NEW CROPS FOR THE NORTH

Orkney College UHI's Agronomy Institute is investigating bog myrtle (sweet gale), in demand for pharmaceutical oil, also ornamental plants for Scandinavian gardens. Dr Geoff Sellers & Dr Xianmin Chang report.

The One O'Clock Toast at the Peedie Kirk today: mapmaker Murdoch Mackenzie by Rev. Jack Muir

2.00 - 3.00 pm *Pickaquooy Centre, Kirkwall*

IS CLIMATE REALLY CHANGING?

A look back over 400,000 years with Prof. John McClatchey of North Highland College UHI's Environmental Research Institute: evidence of climate change and past causes, changes over the last 150 years measured by instruments - and what the next 100 years may hold.

3.30 - 4.30 pm *Pickaquooy Centre, Kirkwall*

DIGGING DEEPER

Current archaeological research projects at Orkney College UHI are applying various scientific techniques to open new windows into Orkney's past. Researchers report on the emerging insights.

5.00 - 6.00 pm *Pickaquooy Centre, Kirkwall*

SCIENCE AT WAR IN ORKNEY

Geoffrey Stell tells of a range of technologies to gather intelligence and defend Scapa Flow. World War I: electricity, wireless and telegraphy, underwater as well as on land. World War II: radar, in networks of stations and at sea; rockets and hydrogen-filled balloons; underwater indicator loops and remotely-controlled minefields.

Sponsored by The Orcadian

7.30 - 10.00 pm *King Street Hall, Kirkwall*

STEAMING TO THE FUTURE

It's produced some of the world's most beautiful engines - and its clean and energy-efficient qualities may bring it again to the fore. Lyndon Shearman and Derek Rayner present an evening of news and films on the comeback of steam in various countries, on rail and also road; and Dennis Whittaker describes a wood-fuelled steam launch. Sample at the interval some engine drivers' cake and Victorian lemonade!

Organised by Orkney Vintage Club with Old Glory magazine

7.30 - 10.00 pm *South Ronaldsay & Burray Parish Church*

THE SHIFTING SANDS AT THE CHURCHILL BARRIERS

Currents have changed, and sand has built up a new landscape. Dr Katherine Selby of the University of York explains the process. Julian Branscombe of SFLPS describes how wildlife has colonised the dunes. Admission free, at door. A site visit from Barrier No 4 takes place tomorrow morning (Saturday 4) at 10.00 am.

Organised by Scapa Flow Landscape Partnership Scheme

Saturday 4 September

10.00 am - 4.00 pm *King Street Hall, Kirkwall*

FAMILY DAY

Generate your own wave power. Build a bridge. Turn a turbine. Practice your flying: from the Scillies to Unst via Kirkwall. Learn to recognise rocks and fossils. Grow a new taste and zero your waste. Make a lantern or a rain gauge. Connect the K'Nex to make an air-powered vehicle. Teach a robot to dance. Learn about programming computers. Test your body's capabilities at the SportStation. Wild flowers for bumblebees - identify the seed heads of flowers that support bees in the Orkney countryside. Astronomy drop-in sessions. Art and craft activities. Porridge and pancakes available at lunchtime. Admission £4 & £2 for the day.

Supported by the Scottish Government

10.00 - 11.00 am *St Magnus Centre, Kirkwall*

IMAGES OF RESEARCH: JOURNEY THROUGH SCOTLAND

Photographer David McIntyre and scientist Elisabeth Innes present the stories behind the images inspired by research at six Scottish research institutes and developed into the Enlightenment exhibition currently on show at Pickaquooy.

Sponsored by the Scottish Government, RERAD and Moredun Research Institute

11.30 am - 12.15 pm *Town Hall, Kirkwall*

THE FLASHING AND BANGING CHEMISTRY SHOW

with Prof. Donald MacPhee and Dr Richard Wells, Aberdeen University, in lively form. 'It was magic because it was very colourful and it gave me a big fright. I liked when the chemicals mixed and made fireworks.' - Craig, Lochaber.

Sponsored by the Royal Society of Chemistry

The One O'Clock Toast at the Peedie Kirk today: writer Mary Brunton by Sheila Garson

1.00 - 4.00 pm *Broad Street, Kirkwall*

VINTAGE RALLY

Orkney Vintage Club with cars, engines with fuels ranging from waste wood to Westray biodiesel, a tractor run setting off at 1.30 pm - plus the Willowburn Valley Stompers.

2.00 - 5.30 pm *Earl's Palace & Bishop's Palace, Kirkwall*

A GREEN AND MEDIEVAL AFTERNOON

Help to celebrate Historic Scotland's green tourism award by visiting the palaces, enjoying some refreshments with a medieval flavour, listening to tales of old Orkney and the world of the Middle Ages, and some appropriate music. Admission free.

Organised by Historic Scotland and the Faraday Club

2.15 pm - 3.15 pm *Town Hall, Kirkwall*

SINGALONG WITH MR BOOM

For small and happy people, and bigger ones who they bring along. Switch on engines, get in gear - the one-man lunar band is here!

Sponsored by Talisman Energy (UK) Limited

5.30 - 6.30 pm *Ayre Hotel, Kirkwall*

IMPROVING ANIMAL HEALTH AND WELFARE

The Moredun Foundation was set up in 1920 by Scottish farmers to find solutions to animal health problems. Still governed by Scottish farmers, its research has a major impact on the farming community in Scotland and worldwide. To mark its 90th birthday its chairman, John Ross, and its director, Prof. Julie Fitzpatrick, describe its work of today and issues relating to Orkney.

Sponsored by Moredun Foundation and organised in association with Orkney Auction Mart

6.00 - 7.00 pm *St Magnus Cathedral, Kirkwall*

BACH'S GOLDEN LANDSCAPES

The Mayfield Singers and other local musicians on a journey through the world of Bach, from the Motets to Swingle. There are insights on the way about the patterns of numbers in the music, and images by Slovenian artist Matjuška Teja Krašek, who blends together art and mathematics.

Sponsored by Highland Park

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

A night out for the family with Dave and company, traditional dancing, and Mr Boom! Suppers of Orkney fare available. **Tickets £5 & £3.**

Sponsored by Talisman Energy (UK) Limited

8.30 - 9.30 pm *King Street Hall, Kirkwall*

ROCK GUITAR

Acoustics expert Dr Mark Lewney explains the physics of rock using riffs from Vivaldi to AC/DC, explains the secret of the Stradivarius, and shows how string vibrations might lie at the heart of the universe. 'A cross between Einstein and Jimi Hendrix' - CBBC

Sponsored by the IET

Sunday 5 September

11.15 am - 12.15 pm *St Magnus Cathedral*

SCIENCE FESTIVAL SERVICE

with the Rev. Fraser Macnaughton and St Magnus Cathedral Choir

The One O'Clock Toast at the Peedie Kirk today: botanist and archaeoastronomer Magnus Spence by Howie Firth

1.30 - 5.00 pm *from Palace Road, Kirkwall*

BUS TOUR: BERE, BEER AND BOARDHOUSE

Visit the Barony Mill, then Rob Hill's Highland Brewery at Swannay. Background stories on the bus from Sandy Firth and Richard Shearer. **Advance booking essential: over-18s only. Tickets £5 & £3. Free to IBD members and industry staff.**

Organised by the Institute of Brewing and Distilling and sponsored by Stagecoach

2.00 - 5.00 pm *Ness Battery, Stromness*

OPEN AFTERNOON

Opening the doors to the most intact World War II gun battery in Britain today. Gun emplacements, observation/control tower, accommodation huts, mess hall. Photographs and displays. Meet at main gate. Guided tours every half hour, last tour starts 4.30 pm. Admission free.

Organised by Scapa Flow Landscape Partnership Scheme

2.30 - 3.30 pm *St Magnus Centre, Kirkwall*

THE LIGHT SIDE OF PHYSICS

Is science serious? With no room for humour? Not at all, says Dr Moshe Rishpon of the Weizmann Institute of Science in Israel: it can entertain and sometimes surprise - and he gives lively demonstrations for a family audience to enjoy: on light, sound, weightlessness, and more.

5.00 - 6.30 pm *Skail House, Sandwick*

PRIDE WITHOUT PREJUDICE

The story of an Orkney writer, her links with Jane Austen and with revolutions in science and society. Rose Pipes introduces the work of Mary Brunton. Sarah Jane Gibbon reads excerpts. Howie Firth identifies the villain of the piece. Liz Ashworth prepares an 18th-century afternoon tea. Simon W. Hall sets the scene. **Numbers limited: booking essential. Tickets £5 & £3.**

Sponsored by Tods of Orkney Ltd

7.30 - 8.30 pm *St Magnus Centre, Kirkwall*

ANCIENT VIRAL VOYAGERS

Ancient viral infections have left their mark on us and other animals, incorporated into our DNA. They provide a new way to trace movements of people and livestock over tens of thousands of years. Dr June Morris explains how, and describes new evidence suggesting some of this 'alien' DNA may have important biological implications.

Sponsored by W.H.B. Sutherland Ltd

9.00 - 10.00 pm *St Magnus Centre, Kirkwall*

RISING SEAS AND DROWNED LANDSCAPES

The hunt for Orkney's first inhabitants has now moved underwater. Rising sea levels over 10,000 years have dramatically altered the islands' shape and we are only just beginning to understand the challenges the early settlers faced. Caroline Wickham-Jones of Aberdeen University and Sue Dawson, Dundee University, describe the new discoveries changing the picture of prehistoric Orkney.

Sponsored by Orkney Car Hire - James D Peace & Co

Monday 6 September

10.00 - 11.00 am *Pickaquooy Centre, Kirkwall*

INDUSTRIES OF THE FUTURE

At the first Orkney Science Festival, Prof. Tom Stevenson of Edinburgh University brought a colleague who showed a new invention - the little single-chip video camera, found today around the world on mobile phones and many other places. What inventions may now be taking shape which could similarly transform the world of twenty years ahead - in computing, electronics, robotics? And what opportunities might they open up for places like Orkney?

Sponsored by the IET

11.30 am - 12.30 pm *Pickaquooy Centre, Kirkwall*

WHITE FISH FUTURE

The fishing industry's in the front line, with fish stocks under pressure and fuel costs rising. Can it continue to provide opportunities for island communities? How can the scientific advice be scrutinised through practical experience and the most effective means of conservation found? Mike Park, chairman of the Scottish White Fish Producers Association, describes how the challenge is being met.

The One O'Clock Toast at the Peedie Kirk today: Arctic explorer John Rae by Bryce Wilson

2.00 - 4.30 pm *Pickaquooy Centre, Kirkwall*

SEAS AND SUNRISES AND INDUSTRIES OF THE FUTURE

Where will the industries of the future come from for Orkney? How can it turn a superb natural environment into skilled jobs? And particularly for young people, seeking career opportunities? Can rural and island regions in Europe share ideas for mutual benefit?

Dr Sandy Kerr of ICIT describes the growth of energy and environmental companies in Stromness. Sam Marcus, Colin Risbridger and Willie McEwen provide an update on developments in Westray. Fiona Smart of UHI HI Links outlines success stories around the Highlands. Graham Bichan of Crantit Dairy highlights the potential of the food industry, with some samples at the break.

Laurent Benveniste and Delphine Filloux of Entrepreneuriat & Territoires describe European initiatives on creating a climate for regional enterprise and for creating networks of woman entrepreneurs.

BOOKING REQUEST FORM

	£ Adult	£ Con.	No. at adult	No. at concess	Total £	p
Thursday 2 September						
Running to the Limit	£4	£2				
The Franklins Down Under	£4	£2				
Orkney and the Picts	£4	£2				
The Hunter Takes a Farm	£4	£2				
Friday 3 September						
The Most Important Process	£4	£2				
New Crops for the North	£4	£2				
Is Climate Really Changing?	£4	£2				
Digging Deeper	£4	£2				
Science at War in Orkney	£4	£2				
Steaming to the Future	£4	£2				

Saturday 4 September						
Images of Research	£4	£2				
Flashing & Banging Chemistry	£4	£2				
Singalong with Mr Boom	£4	£2				
Improving Animal Health	£4	£2				
Bach's Golden Landscapes	£4	£2				
The Island Ceilidh	£5	£3				
Rock Guitar	£4	£2				

Sunday 5 September						
Bus Tour: Bere, Beer	£5	£3				
The Light Side of Physics	£4	£2				
Pride Without Prejudice	£5	£3				
Ancient Viral Voyagers	£4	£2				
Rising Seas	£4	£2				

Monday 6 September						
Industries of the Future	£4	£2				
White Fish Future	£4	£2				
Seas, Sunrises, Industries	£4	£2				
Power from Wave and Tide	£4	£2				
Murder, Mystery, Microscopes	£5	£3				

continued overleaf

Programme updates and online booking option at www.oisf.org

And we Twitter @OrkSciFest!

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.