

SATURDAY 15 OCTOBER 2016

SAT 19:00 Lost Kingdoms of South America (b01qbz9k)
Lands of Gold

Through the mountains and jungles of Colombia, archaeologist Dr Jago Cooper goes in search of the truth behind one of the greatest stories ever told - the legend of El Dorado. His journey takes him from Bogota to the Caribbean coast, through territories once dominated by two cultures, the Muisca and the Tairona, who flourished for centuries before the arrival of the Spanish in the 16th century. Dr Cooper reveals forgotten peoples who valued gold in a way the western world still struggles to understand, travelling to an astonishing lost city and meeting the last survivors of an ancient civilisation.

SAT 20:00 The Incredible Human Journey (b00kfqps)
Out of Africa

Dr Alice Roberts travels the globe to discover the incredible story of how humans left Africa to colonise the world - overcoming hostile terrain, extreme weather and other species of human. She pieces together precious fragments of bone, stone and new DNA evidence and discovers how this journey changed these African ancestors into the people of today.

Alice travels to Africa in search of the birthplace of the first people. They were so few in number and so vulnerable that today they would probably be considered an endangered species. So what allowed them to survive at all? The Bushmen of the Kalahari have some answers - the unique design of the human body made them efficient hunters and the ancient click language of the Bushmen points to an early ability to organise and plan.

Humans survived there, but Africa was to all intents and purposes a sealed continent. So how and by what route did humans make it out of Africa? Astonishing genetic evidence reveals that everyone alive today who is not African descends from just one successful, tiny group which left the continent in a single crossing, an event that may have happened around 70,000 years ago. But how did they do it? Alice goes searching for clues in the remote Arabian Desert.

SAT 21:00 Department Q (b0801gdr)
The Keeper of Lost Causes

Carl Morck, a troubled detective, is assigned to the newly created 'Department Q', a basement-bound job filing cold cases. He is allocated an assistant, Assad, and between them they review the case files to determine which ones can be closed. Always one to go against orders, Morck throws them headlong into the mystery of a politician's disappearance during a ferry crossing five years earlier.

Based on the first of Jussi Adler-Olsen's 'Department Q' series of novels.

In Danish with English subtitles.

SAT 22:30 Sweet Home Alabama: The Southern Rock Saga (b01f1b0)

An epic 1970s tale about a group of rebel rock bands who rose up from one of the most unpopular, marginalised parts of the USA - the Deep South - and conquered the world.

The Allman Brothers, Lynyrd Skynyrd and others that followed did this entirely on their own terms, blending the music of the region - blues, country, rock and roll - with a gung-ho attitude that set the South, and then America, on fire.

Their diverse styles, from juke joint boogie and country-rock honks to cosmic blues blasts, had a huge cultural and political impact, even helping to elect Jimmy Carter as president in 1976.

Their extraordinary adventure is brought to life through vivid period archive and contributions from the survivors of those crazy times, including Gregg Allman, REM's Mike Mills, Doug Gray, Al Kooper, Bonnie Bramlett, Charlie Daniels and other key figures in the movement.

Turn on, tune in, get jukin'...

SAT 23:30 Southern Rock at the BBC (b01f1bwb)

Classic clips - from the Old Grey Whistle Test, In Concert and even Wogan - of Southern rock boogie in excelsis from the bands who poured out of the Deep South in the 70s. Includes performances from The Ozark Mountain Daredevils, Delaney & Bonnie with Eric Clapton, Dickey Betts from The Allman Brothers Band, The Marshall Tucker Band, Black Oak Arkansas, The Charlie Daniels Band, Gregg Allman with then-wife Cher, Edgar Winter and, of course, Lynyrd Skynyrd.

SAT 00:30 Top of the Pops (b07z3cn5)

John Peel presents the weekly pop chart show, first broadcast on 27 May 1982. Includes appearances from Debbie Harry, Genesis, Japan, Soft Cell, Duran Duran and Madness. Also includes a dance performance from Zoo.

SAT 01:00 Top of the Pops (b07zf818)

David Jensen presents the weekly pop chart show, first broadcast on 3 June 1982. Includes appearances from Junior, Charlene, ABC, Fun Boy Three, Echo & the Bunnymen, Siouxsie & the Banshees, Adam Ant and Madness. Also includes a dance performance from Zoo.

SAT 01:30 Sweet Home Alabama: The Southern Rock Saga (b01f1b0)

[Repeat of broadcast at 22:30 today]

SAT 02:30 Southern Rock at the BBC (b01f1bwb)

[Repeat of broadcast at 23:30 today]

SUNDAY 16 OCTOBER 2016

SUN 19:00 Mozart in Prague: Rolando Villazon on Don Giovanni (b042m80v)

Don Giovanni had its premiere performance in Prague on October 29, 1787. Mozart's vastly successful opera, based on the stories of legendary libertine Don Juan, delighted the city that had taken him to their hearts. But what brought them all - composer and audience, theatre manager and cast - to this time and place?

Acclaimed tenor Rolando Villazon presents the story of one of the best-known operas of all time. Based in Prague, Rolando explores the run-up to that candle-lit first performance, looking at the music of the opera and the social setting in which it was first performed, before recreating the finale of the opera close to how it would have looked and sounded on that autumn evening.

Rolando visits the Estates Theatre, where Mozart conducted Don Giovanni's premiere. He works with local orchestra Collegium 1704, their conductor Václav Luks and opera singers Svatopluk Sem, Alzbeta Polackova, Fulvio Bettini and Jan Martinik, performing and dissecting the music of the opera. By singing and discussing key passages, Rolando reveals Mozart's genius as a composer and the revolutionary musical techniques he used.

As he explores, we are able to grasp how Don Giovanni not only entertained the audience but terrified them by playing on the deepest fears of the 18th century, how different it would have sounded played on the instruments of the time, and how with this masterpiece Mozart went beyond the musical conventions of the day and created something unique. By talking with a range of experts and drawing on historical sources, Rolando brings to life the setting, costumes and audience, and presents a detailed picture of the world in which the opera was first performed.

SUN 20:00 Len Goodman's Dance Band Days (b03n2sck)

Len Goodman takes a step back in time to the heyday of British dance bands, a golden age of music that laid the foundations for 20th-century pop. In the years between the wars, band leaders such as Bert Ambrose and Jack Hylton were household names and the country danced its socks off. It was a time of radio and records, when Britain absorbed black American music and gave it a unique twist.

Many of the bands played in the posh society hotels of London's West End. Some were making big money and enjoying the high life. They were also keen to broadcast to the nation via the new BBC. Len discovers that 'Auntie' had a tricky relationship with the bands - though they formed a key part of the corporation's entertainment output, during the 1920s and 1930s there were concerns about the influence of American culture, song-plugging and commercialisation.

Crooning was also developed as a new style of singing, thanks in part to the development of better microphones. But this new 'intimate' form of singing did not impress everyone at the corporation. Despite the BBC's concerns the vocalists continued to enjoy huge success and fame, as did the bands. Len follows the story of vocalist Al Bowly, a man of huge talent who attracted great public adoration. Al was killed in London's blitz and buried in a mass grave - a sad and symbolic moment in the history of dance bands.

Len discovers how we went dance band crazy and asks why, within just two decades, our love affair with this music began to fall flat.

SUN 21:00 BBC: The Secret Files (b076yvvv)

Episode 2

Penelope Keith looks into the BBC's secret dealings with some of the 20th century's most intriguing figures, including Winston Churchill, Tony Hancock and Alec Guinness.

SUN 22:00 Storyville (b0803hst)

Moazzam Begg: Living the War on Terror

Gripping first-hand account by a former Guantanamo detainee that chronicles the rise of modern jihad, its descent into terror and the reaction of the west. Moazzam Begg, a Birmingham-raised British Pakistani, has experienced a generation of conflict. He has been a witness to the escalation of global radicalisation for the past two decades, from the Bosnian conflict to wars in Afghanistan and Syria.

The documentary captures his perspective on the escalation in tensions between the west and Islam - from his forced confession and testimony as a free man to his experience as a British Muslim and living the 'War on Terror'. Begg's story, intercut with news archive, raises important questions about how democracies respond to terrorism and how that response has impacted communities and individuals.

SUN 23:25 Horizon (b00vhw1d)

2010-2011

Is Seeing Believing?

Horizon explores the strange and wonderful world of illusions - and reveals the tricks they play on our senses and why they fool us.

We show how easy it is to trick your sense of taste by changing the colours of food and drink, explain how what you see can change what you hear, and see just how unreliable our sense of colour can be.

But all this trickery has a serious purpose. It's helping scientists to create a new understanding of how our senses work - not as individual senses, but connected together.

It holds the intriguing possibility that one sense could be mapped into another. This is what happened to Daniel Kish, who lost his sight as a child. He is now able to create a vision of the world by clicking his tongue which allows him to echolocate like a bat.

And in a series of MRI scans, scientists are now looking to find out if Daniel's brain may have actually rewired itself enabling him to use sound to create a visual image of the world.

SUN 00:25 Light and Dark (b03jrxhx)

Dark

Professor Jim Al-Khalili tells the story of how we went from thinking we were close to a complete understanding of the universe to realising we had seen almost none of it. Today, our best estimate is that more than 99 per cent of the cosmos is hidden in the dark, invisible to our telescopes and beyond our comprehension.

The first hints that there might be more out there than meets the eye emerged from the gloom in 1846 with the discovery of the planet Neptune. It was hard to find, because at four billion kilometres from the sun there was precious little light to illuminate it and, like 89 per cent of all the atoms in the universe, it gives off almost no light.

In the middle of the 20th century scientists discovered something even stranger - dark matter - stuff that wasn't just unseen, it was fundamentally un-seeable. In fact, to explain how galaxies are held together and how they formed in the first place, there needed to be four times as much dark matter as there was normal atomic matter.

In the late 1990s scientists trying to measure precisely how much dark matter there was in the universe discovered something even more elusive out there - dark energy, a mysterious new force driving the universe apart that is thought to make up a colossal 73 per cent of it.

Finally, Jim explores the quest to uncover the nature of dark energy and to see dark matter pull the first stars and galaxies together, a quest that involves peering into the darkest period in the cosmos's past.

SUN 01:25 Mechanical Marvels: Clockwork Dreams (b0229pbp)

Documentary presented by Professor Simon Schaffer which charts the amazing and untold story of automata - extraordinary clockwork machines designed hundreds of years ago to mimic and recreate life.

The film brings the past to life in vivid detail as we see how and why these masterpieces were built. Travelling around Europe, Simon uncovers the history of these machines and shows us some of the most spectacular examples, from an entire working automaton city to a small boy who can be programmed to write and even a device that can play chess. All the machines Simon visits show a level of technical sophistication and ambition that still amazes today.

As well as the automata, Simon explains in great detail the world in which they were made – the hardship of the workers who built them, their role in global trade and the industrial revolution and the eccentric designers who dreamt them up. Finally, Simon reveals that these long-forgotten marriages of art and engineering are actually the ancestors of many of our most-loved modern technologies, from recorded music to the cinema and much of the digital world.

SUN 02:25 Dissected (p01mv2rj)

The Incredible Human Foot

In a purpose-built dissection lab, Dr George McGavin is joined by leading anatomy experts to dissect a real foot, taking it apart layer by layer to reveal what makes it unique in the animal kingdom. We discover the incredible natural engineering that is key to our greatest physical achievements, from a baby's first steps to a ballerina on pointe.

MONDAY 17 OCTOBER 2016

MON 19:00 World News Today (b07zjmvm)

The latest national and international news, exploring the day's events from a global perspective.

MON 19:30 Canal Walks with Julia Bradbury (b010v7kx)

The Caledonian Canal

Seasoned stomper Julia Bradbury dons her walking boots once again and this time she is exploring her own British backyard, travelling along the country's network of canals and their accompanying towpath trails. This sees her navigating Highland glens, rolling countryside and river valleys, as well as our industrial heartlands, following these magical waterways as they cut a sedate path through some of the country's finest scenery.

Julia kicks off her tour with a visit to the Scottish Highlands. Against the stunning backdrop of Ben Nevis, her walk starts near Fort William where she embarks on her eight-mile trip along the Caledonian Canal, the majestic waterway that cuts through beautiful mountain country and is regarded as one of the most ambitious canals of its time. Julia's journey tells the story of one of the greatest canal engineers, Thomas Telford, whose ambition was to create not only an engineering marvel, but also badly needed jobs and wealth for the Highlands. Two hundred years on, it is now one of the most popular walking trails in the country.

MON 20:00 British Gardens in Time (b042638j)

Nymans

Nymans, one of the most fashionable and romantic gardens of the Edwardian and interwar years, was the creation of a family of German emigres of Jewish descent. The Messels arrived in Britain in 1870 at a time when both anti-semitism and anti-German sentiment were rife. Nevertheless, Ludwig Messel succeeded in establishing a successful stockbroking firm and creating at Nymans the quintessential English garden with rare plants and a theatrical herbaceous border inspired by William Robinson.

His children and grandchildren would continue to develop the garden and the family's spectacular social trajectory reached its apogee with Ludwig's great-grandson Antony Armstrong-Jones's marriage to Princess Margaret. However, Nymans was to repeatedly face disaster as a fire devastated the house leaving just a romantic ruin to dominate the garden, while the garden itself came close to total destruction in the Great Storm of 1987.

MON 21:00 Sleuths, Spies & Sorcerers: Andrew Marr's Paperback Heroes (p040vppp)

Detectives

In the first episode of a series that explores the books we (really) read, Andrew Marr investigates the curious case of detective fiction. This is a genre that has been producing best-sellers since the 19th century, and whose most famous heroes – Sherlock Holmes, Hercule Poirot, Inspector Rebus – are now embedded in our collective psyche. But how does detective fiction work – and how do the best crime writers keep us compulsively turning the pages?

Andrew deconstructs detective stories by looking at their 'rules'

– the conventions we expect to be present when we pick up a typical mystery. Because detective fiction is an interactive puzzle, these rules are the rules of a game – a fiendish battle of wits between the reader and the writer. What is remarkable is that instead of restricting novelists (as you might expect), these rules stimulate creativity, and Andrew reveals how clever writers like Agatha Christie have used them to create a seemingly infinite number of story-telling possibilities.

The fictional detective is a brilliant invention, a figure who takes us to (often dark) places that we wouldn't normally visit. While we are in their company, no section of society is off-limits or above suspicion, and Andrew shows how writers have used crime fiction not merely to entertain, but also to anatomise society's problems.

Andrew interviews modern-day crime writers including Ian Rankin, Sophie Hannah and Val McDermid, while profiling important pioneers such as Agatha Christie, Dashiell Hammett and Ruth Rendell. Along the way, he decodes various great set-pieces of the detective novel such as Hercule Poirot's drawing room denouements, and the 'locked room' mysteries of John Dickson Carr.

MON 22:00 The Victorians (b00hxqr0)

Series 1

Having It All

Jeremy Paxman continues his exploration of the Victorian world. Inspired by the paintings of the day, he tells the story of Victorian power.

Railways, factories and military might made Britain the richest country in the world. Paxman finds British generals dressed in togas in the Foreign Office, meets the horse that led the Charge of the Light Brigade, drives a steam train and visits a fort, a steelworks and a millionaire's mansion to tell the story of the time when Britain seemed to be having it all.

MON 23:00 The First World War (b01rp9t7)

Global War

Germany gambled that Britain might risk everything to protect her empire, even victory on the Western Front. So, to divert British resources, maverick German commanders led the British a dance across the Pacific, Africa and the Middle East. They became legends in Germany and Britain – men like Admiral Graf von Spee, who inflicted Britain's greatest naval defeat for 250 years.

The global war sucked in Africans, Chinese and Indians to serve in France. Meanwhile, the war in Africa exploited its people and left behind a wasteland, but sowed the seeds of self-determination.

MON 23:50 The First World War from Above (b00vyrzh)

Fergal Keane tells the story of the World War One from a unique new aerial perspective. Featuring two remarkable historical finds, including a piece of archive footage filmed from an airship in summer 1919, capturing the trenches and battlefields in a way that has rarely been seen before. It also features aerial photographs taken by First World War pilots – developed for the first time in over 90 years – that show not only the devastation inflicted during the fighting, but also quirks and human stories visible only from above.

MON 00:50 Timeshift (b03fv7sl)

Series 13

Full Throttle: The Glory Days of British Motorbikes

Timeshift returns with an exploration of the British love of fast, daring and sometimes reckless motorbike riding during a period when home-grown machines were the envy of the world. From TE Lawrence in the 1920 to the 'ton-up boys' and rockers of the 1950s, motorbikes represented unparalleled style and excitement, as British riders indulged their passion for brands like Brough Superior, Norton and Triumph.

But it wasn't all thrills and spills – the motorbike played a key role during World War II and it was army surplus bikes that introduced many to the joy and freedom of motorcycling in the 50s, a period now regarded as a golden age. With its obsession with speed and the rocker lifestyle, it attracted more than its fair share of social disapproval and conflict.

Narrated by John Hannah.

MON 01:50 Len Goodman's Dance Band Days (b03n2ck)

[Repeat of broadcast at 20:00 on Sunday]

MON 02:50 Sleuths, Spies & Sorcerers: Andrew Marr's

Paperback Heroes (p040vppp)

[Repeat of broadcast at 21:00 today]

TUESDAY 18 OCTOBER 2016

TUE 19:00 World News Today (b07zjmvs)

The latest national and international news, exploring the day's events from a global perspective.

TUE 19:30 Canal Walks with Julia Bradbury (b0110ghh)

The Worcester and Birmingham Canal

Seasoned stomper Julia Bradbury dons her walking boots once again to explore her own British backyard, travelling along the country's network of canals and their accompanying towpath trails. Julia navigates Highland glens, rolling countryside and river valleys, as well as our industrial heartlands, and follows these magical waterways as they cut a sedate path through some of the country's finest scenery.

Julia starts this walk in Birmingham, which surprisingly boasts more miles of canal than Venice. But her mission isn't to seek out gondolas or ice cream – it's to discover how the city, through its canal network, became the centre of the Industrial Revolution. It's also the start of Julia's two-day walk along the historic and picturesque Worcester and Birmingham Canal, which cuts a 30-mile path through to the River Severn. The highlight of the canal is a dramatic two-mile flight of 30 locks which lower the canal by 220 feet. Negotiating this flight of locks is considered to be a rite of passage by boaters, and it's definitely one for the tick list for walkers.

TUE 20:00 Great Barrier Reef (b019hd78)

Reef to Rainforest

Three-part series exploring Australia's Great Barrier Reef, one of the natural wonders of the world and the largest living structure on our planet.

Monty Halls explores its full 2,000-kilometre length, from the wild outer reefs of the Coral Sea to the tangled mangrove and steaming rainforest on the shoreline; from large mountainous islands to tiny coral cays barely above sea level; from the dark depths of the abyss beyond the reef to colourful coral gardens of the shallows.

Along the way, he experiences the reef at its most dangerous and its most intriguing, and visits areas that have rarely been filmed, from the greatest wildlife shipwreck on earth to the mysterious seafloor of the lagoon, where freakish animals lurk under every rock.

The Great Barrier Reef as a whole covers an area larger than Great Britain, but amazingly only seven per cent of it is coral reef. The rest is a variety of interconnected habitats including the world's oldest jungle, hundreds of islands, mangrove swamps, mysterious deep-water gardens, vast sand flats and meadows of sea grass – all full of amazing wildlife. A giant deep-water lagoon connects all of these, and many of the creatures that live in it are almost impossibly weird – from giant hammerhead sharks to the bizarre 'pearl fish' that lives its life up a sea cucumber's bottom.

Marine life here also exists in spectacular profusion, as on the 100-year-old shipwreck of the SS Yongala, considered to be the greatest wildlife wreck on earth. The connections between all these environments mean that not only do they depend on each other, but without them the coral reef itself would not survive.

TUE 21:00 Oak Tree: Nature's Greatest Survivor (b06fq03t)

George McGavin investigates the highly varied and dramatic life of oak tree. Part science documentary, part historical investigation, this film is a celebration of one of the most iconic trees in the British countryside. It aims to give viewers a sense of what an extraordinary species the oak is and provide an insight into how this venerable tree experiences life.

Filmed over a year, George uncovers the extraordinary transformations the oak goes through to meet the challenges of four very different seasons.

In autumn, George goes underground, digging below an oak tree to see how its roots extract precious resources from the soil. And he sees why the oak's superstrong wood made it the perfect material for building some of the most famous ships in naval history, including Nelson's flagship The Victory.

In winter, George discovers the sophisticated strategies the tree uses to survive gales and bitter frosts. He finds out about the oak's vital role in architecture, showing how some very familiar sights, such as the tower of Salisbury Cathedral, are in fact giant oak structures.

In spring, George investigates how the oak procreates, spreading its pollen through the countryside. He discovers the incredibly sophisticated strategies it uses to withstand savage onslaughts from predators hellbent on eating it alive.

In summer, George uses a high-powered microscope to see the hundreds of species that regard the oak as their home. Humans too rely on the oak for their own form of 'sustenance'. Whisky gets its unique flavours from the oak wood barrels in which it's matured.

TUE 22:30 The Brain: A Secret History (b00x7cb5)
Emotions

Dr Michael Mosley continues his exploration of the brutal history of experimental psychology. Experiments on the human mind have led to profound insights into how our brain works - but have also involved great cruelty and posed some terrible ethical dilemmas.

In this film, Michael investigates how scientists have struggled to understand that most irrational and deeply complex part of our minds - our emotions.

Michael meets survivors - both participants and scientists - of some of the key historical experiments. Many of these extraordinary research projects were captured on film - an eight-month-old boy is taught to fear random objects, baby monkeys are given mothers made from wire and cloth, and an adult is deliberately violent before a group of toddlers.

Michael takes part in modern-day experiments to play his own small part in the quest to understand emotions.

TUE 23:30 Natural World (b013cj7q)
2011-2012

Empire of the Desert Ants

Natural World visits the Arizona desert, where a new honey ant queen wages an intense battle for survival as she attempts to build and defend her empire. Eliminating rivals with ruthless efficiency, sacrificing thousands in her quest for domination, murder, cannibalism, genocide - she will do anything to keep her crown.

Empire of the Ants is the epic story of one honey ant queen's dramatic rise to power - and her brutal fall from grace.

TUE 00:30 The Making of King Arthur (b00tg2q2)
Poet Simon Armitage traces the evolution of the Arthurian legend through the literature of the medieval age and reveals that King Arthur is not the great national hero he is usually considered to be. He's a fickle and transitory character who was appropriated by the Normans to justify their conquest, he was cuckolded when French writers began adapting the story, and it took Thomas Malory's masterpiece of English literature, Le Mort d'Arthur, to restore his dignity and reclaim him as the national hero we know today.

TUE 01:30 Mozart in Prague: Rolando Villazon on Don Giovanni (b042m80v)
[Repeat of broadcast at 19:00 on Sunday]

TUE 02:30 Oak Tree: Nature's Greatest Survivor (b06fq03t)
[Repeat of broadcast at 21:00 today]

WEDNESDAY 19 OCTOBER 2016

WED 19:00 World News Today (b07zjmvj)
The latest national and international news, exploring the day's events from a global perspective.

WED 19:30 Canal Walks with Julia Bradbury (b01173bc)
The Kennet and Avon Canal

Seasoned stomper Julia Bradbury dons her walking boots once again to explore her own British backyard, travelling along the country's network of canals and their accompanying towpath trails. This sees her navigating Highland glens, rolling countryside and river valleys, as well as our industrial heartlands, following these magical waterways as they cut a sedate path through some of the country's finest scenery.

Julia starts this walk in the beautiful world heritage city of Bath, where the Kennet and Avon Canal provided a 19th-century 'canal superhighway' between the country's two most important ports, Bristol and London. But only forty years later the trade along the canal was usurped by rail travel, leaving the once great waterway neglected and derelict. Julia's 20-mile walk along

what is arguably the most picturesque stretch of the canal tells the story of how the waterway was restored to its former glory after it was awarded the biggest ever lottery heritage grant. The walk ends at the spectacular Caen Hill Flight of locks, listed as one of the seven wonders of British waterways.

WED 20:00 Castles: Britain's Fortified History (b04tt2f9)
Kingdom of Conquest

Sam Willis tells the story of the English ruler who left the most indelible mark on the castle - the great Plantagenet king, Edward I, who turned it into an instrument of colonisation. Edward spent vast sums to subdue Wales with a ring of iron comprised of some of the most fearsome fortresses ever built. Castles like Caernarfon and Beaumaris were used to impose England's will on the Welsh. But when Edward turned his attention to Scotland, laying siege to castles with great catapults, things didn't go so well for him.

WED 21:00 Timeshift (b0803m60)
Series 16

Bridging the Gap: How the Severn Bridge Was Built

2016 saw the 50th anniversary of the Severn Bridge, which completed the motorway link between England and Wales. Timeshift tells the inside story of the design and construction of 'the most perfect suspension bridge in the world', and how its unique slimline structure arose by accident.

WED 22:00 Sleuths, Spies & Sorcerers: Andrew Marr's Paperback Heroes (p040pvpv)
[Repeat of broadcast at 21:00 on Monday]

WED 23:00 Lost Kingdoms of South America (b01qh0d)
Kingdom of the Desert

In the spectacular deserts of coastal Peru, archaeologist Dr Jago Cooper explores the dramatic rise and fall of Chimor, the first empire of South America. His journey begins among the ruins of a vast lost city once home to an all-powerful monarchy, whose subjects transformed the desert landscape, created gold and silver treasures and believed so strongly in the power of their gods that they made the most shocking of sacrifices. Chimor thrived despite facing some of the most extreme climate conditions in the world, but not even this powerful empire could withstand the forces that eventually destroyed it.

WED 00:00 The Last Explorers (b017sp66)
William Speirs Bruce

Neil Oliver retraces the expeditions of four Scottish explorers who planted ideas rather than flags - ideas that shaped the modern world we know today.

Following in the footsteps of a scientific explorer who has become all but lost to history, Neil charts the remarkable story of William Speirs Bruce, one of Britain's greatest, but least-known, explorers. Bruce set out to conquer Antarctica, not for imperial glory, but to advance scientific knowledge in an era when exploration had become harnessed to national prestige.

WED 01:00 Britain's Whale Hunters: The Untold Story (b046pb27)
The Rise

Writer Adam Nicolson is granted rare access to the ruins of the whaling stations on the remote British island of South Georgia. Amazing rarely seen archive footage and first-hand testimony from the last of Britain's whale hunters reveals what it was really like to have been a whale hunter in Antarctica, providing Europe with essential oils for soap and food. Putting our modern environmental guilt to one side, this provocative series looks at how and why whale populations were so drastically reduced in the 20th century and attempts to see whaling through the eyes of the time.

A few hundred years ago the oceans were home to millions of whales, but then we found that they were incredibly useful for everything from lighting and fashion to soap and food. Adam discovers the remarkable, forgotten tale of Britain as a major whaling nation right up to the 1960s, while exploring the incredible ruins of its largest centre on the remote British island of South Georgia.

Adam starts his journey on the west coast of Scotland, his favourite place to escape to since boyhood. It's his realisation that these waters would have once been home to many whales that has prompted him to find out about whaling. He sails up the coast to Stornoway harbour, where there's a vivid account of a traditional hunt of pilot whales.

He discovers how whaling was commercialised to supply

Britain's growing cities with a vast range of products: from corsetry and umbrella stays to street lighting. But the real shift in the scale of the industry comes in the late 19th century with the inventions of Norwegian Svend Foyn. Adam joins the British whalers on a restored whale-catching ship in Norway, where they explain how grenade-tipped harpoons and steam winches revolutionised the type and number of whales that could be hunted.

With whale populations in the north becoming hunted out by the start of the 20th century, the whalers turned their attention to the Antarctic. Adam travels via the Falkland Islands to the remote and spectacular Antarctic island of South Georgia. This uninhabited British outpost very quickly became the centre of the world's whaling industry, with six whaling stations. The biggest, Leith Harbour, belonged to the world's largest whaling company at the time - Christian Salvesen from Edinburgh.

Adam explores this complete whaling town, a time capsule of Britain's industrial past, which was abandoned in 1965. He finds huge, asbestos-clad machinery and pieces together how whales were processed, and after hearing about the whalers' illegal hooch, discovers a hidden still in one of the bunkrooms.

The episode ends with the peak of whaling on South Georgia in the mid-1920s - over 8,000 whales were killed and processed in a year. New processes meant that whale oil could now be used to make much-needed soap and edible fats for Europe, and Salvesens were making an annual profit equivalent to £100 million in today's economy. But, thanks to a revolution in ship design, the whaling industry was about to become far bigger still.

WED 02:00 BBC: The Secret Files (b076yvyv)
[Repeat of broadcast at 21:00 on Sunday]

WED 03:00 Timeshift (b0803m60)
[Repeat of broadcast at 21:00 today]

THURSDAY 20 OCTOBER 2016

THU 19:00 World News Today (b07zjmw3)
The latest national and international news, exploring the day's events from a global perspective.

THU 19:30 Top of the Pops (b080193m)
Simon Bates presents the weekly pop chart show, first broadcast on 17 June 1982. Includes appearances by Natasha, Roxxy Music, Echo & the Bunnymen, Duran Duran, ABC, Bow Wow Wow, Queen, Toyah and Adam Ant.

THU 20:00 Railways: The Making of a Nation (b07x4f7s)
The New Commuters

Historian Liz McIvor explores how Britain's expanding rail network was the spark to a social revolution, starting in the 1800s and continuing through to modern times. A fast system of transportation shaped so many areas of our industrial nation - from what we eat to where we live, work and play. The railways generated economic activity but they also changed the nature of business itself. They even changed attitudes to time and how we set our clocks! Our railways may have reflected deep class divisions, but they also brought people together as never before, and helped forge a new sense of national identity.

This episode looks at the railways enabled us to live further and further from the places where we worked. Before the age of steam you would need a horse to travel long distances on land. Throughout the 19th and 20th centuries our railways encouraged the development of suburbia inhabited by a new type of resident and worker - the commuter. In some cases, new places emerged on the map simply because of the railways - places like Surbiton. Liz visits London and the south east of England, our nation's largest commuter zone. The Victorian rail network was never part of a single grand plan, but emerged and evolved, line by line, over decades. For today's commuters, work is still going on to create a system that serves their needs!

THU 20:30 Hive Minds (b07zk6tt)
Series 2

Logophiles v Ortographobes

Fiona Bruce presents the quiz show where players not only have to know the answers, but have to find them hidden in a hive of letters. It tests players' general knowledge and mental agility, as they battle against one another and race against the clock to find the answers.

Logophiles take on Ortographobes in this edition.

THU 21:00 Surviving Aberfan (b07zk62d)

Fifty years ago on October 21st 1966 a roaring avalanche of coal waste crashed into a school and 18 houses in the south Wales village of Aberfan. Death and destruction were wrought in a few unbelievable minutes. It was a race against time to rescue survivors. 116 children and 28 adults were killed. It is a day everyone who lived through it will always remember. In this film the people of Aberfan tell their stories of tragic loss, miraculous survival and heroic rescue. They also reveal how they have coped with the consequences of the disaster. This is their story of surviving Aberfan.

THU 22:00 Timeshift (b06b36q3)

Series 15

A Very British Map: The Ordnance Survey Story

For over 200 years, Ordnance Survey has mapped every square mile of the British Isles, capturing not just the contours and geography of our nation, but of our lives. Originally intended for military use, OS maps were used during wartime to help locate enemy positions. In peacetime, they helped people discover and explore the countryside.

Today, the large fold-out paper maps, used by generations of rambblers, scouts and weekend adventurers, represent just a small part of the OS output. As Ordnance Survey adjusts to the digital age, Timeshift looks back to tell the story of a quintessentially British institution.

THU 23:00 The Incredible Human Journey (b00kfqps)

[Repeat of broadcast at 20:00 on Saturday]

THU 00:00 Great Barrier Reef (b019hd78)

[Repeat of broadcast at 20:00 on Tuesday]

THU 01:00 Top of the Pops (b080193m)

[Repeat of broadcast at 19:30 today]

THU 01:40 The Bee Gees at the BBC... and Beyond (b04v8679)

Classic Bee Gees studio performances from the BBC and beyond including all the big hits, rare 60s performances from European TV, including a stunning I Started a Joke, a rarely seen Top of the Pops performance of World, the big hits of the 70s and some late performances from the 90s, with the brothers Gibb in perfect harmony.

THU 02:40 Surviving Aberfan (b07zk62d)

[Repeat of broadcast at 21:00 today]

FRIDAY 21 OCTOBER 2016**FRI 19:00 World News Today (b07zjmw8)**

The latest national and international news, exploring the day's events from a global perspective.

FRI 19:30 Top of the Pops (b0807yy5)

John Peel presents the weekly pop chart show, first broadcast on 1 July 1982. Includes appearances from Natasha, Captain Sensible, Visage, Queen, Midge Ure, The Jam and Dollar. Also includes a dance performance from Zoo.

FRI 20:00 The Good Old Days (b0806gxx)

Leonard Sachs presents an edition of the old-time music hall programme, first broadcast on 29 January 1976. With guests Danny La Rue, Dorothy Ross, Francis van Dyke and members of the Players Theatre, London.

FRI 20:45 Sounds of the Sixties (b009x6kv)

Reversions

The Folk Revival

Bob Dylan and Leonard Cohen feature in this folk tinged episode of 60s archive.

FRI 20:55 Pop Go the Sixties (b00cyz26)

Series 2

Peter and Gordon

Pop moments from the BBC's sixties archive. From a 1964 edition of Crackerjack, pop folk duo Peter Asher and Gordon Waller sing A World without Love written by Paul McCartney - who was going out with Peter's sister at the time.

FRI 21:00 Pink Floyd Beginnings 1967-1972 (b0803q78)

Pink Floyd released their first single in 1967, and as their popularity around the world grew, they increasingly travelled outside the UK to perform live shows and make TV appearances. After The Dark Side of the Moon became a global smash, the band concentrated on the creative freedom of live performance, leaving the world of TV behind, but now, after painstaking research, tapes of those early historic appearances have been tracked down and compiled into a fascinating hour of early Pink Floyd.

With frontman Syd Barrett, they perform Astronomy Domine and Jugband Blues, and after Syd's departure, Roger Waters, David Gilmour, Richard Wright and Nick Mason can be seen playing a full range of their eclectic material, from out and out pop in It Would Be So Nice, through instrumental improvisations, collaboration with choir and orchestra on Atom Heart Mother and enduring rock material like Wot's... Uh the Deal.

Beginnings 1967-1972 tracks the fascinating gestation of one of the world's most creative and heralded groups in the less well-known period that preceded the triumphs of The Dark Side of the Moon, Wish You Were Here and The Wall.

FRI 22:00 Totally 60s Psychedelic Rock at the BBC (b06jp24d)

A compilation from the depths of the BBC archive of the creme de la creme of 1960s British psychedelic rock from programmes such as Colour Me Pop, How It Is, Top of the Pops and Once More with Felix.

Featuring pre-rocker era Status Quo, a rustic-looking Incredible String Band, a youthful Donovan, a suitably eccentric performance from The Bonzo Dog Doo Dah Band, a trippy routine from Julie Driscoll, Brian Auger & The Trinity, a groovy tune from The Moody Blues, a raucous rendition by Joe Cocker of his version of With a Little Help From My Friends and some pre-Wizzard Roy Wood with The Move.

Plus classic performances from the likes of Procol Harum, Cream, Jimi Hendrix and The Who.

FRI 23:00 Genesis: Together and Apart (b04l3phb)

A feature-length documentary about one of the most successful British bands in rock music, reuniting Phil Collins, Peter Gabriel, Tony Banks, Mike Rutherford and Steve Hackett to tell their story. The film recounts their extraordinary musical story, exploring the songwriting and the emotional highs and lows. It features previously unseen archive material and rare footage from across their entire career.

FRI 00:30 Top of the Pops (b0807yy5)

[Repeat of broadcast at 19:30 today]

FRI 01:00 Pink Floyd Beginnings 1967-1972 (b0803q78)

[Repeat of broadcast at 21:00 today]

FRI 02:00 Totally 60s Psychedelic Rock at the BBC (b06jp24d)

[Repeat of broadcast at 22:00 today]

FRI 03:00 Prog at the BBC (b00g8tfx)

Compilation of some of the greatest names and British bands in what they still dare to call prog rock, filmed live in the BBC studios in the early 1970s. Expect to see stadium names like Yes, Genesis and Emerson, Lake and Palmer alongside much-loved bands of the era including Caravan, Family, Atomic Rooster and more.