# A selection of videos. Which would you like to see next? Patrick and Chris

### **Dinosaurs: New Visions of a Lost World**

Professor Michael J Benton brings a visual guide to the world of the dinosaurs, showing how rapid advances in technology and amazing new fossil finds have changed the way we see dinosaurs forever. By Prof Michael Benton

### **Deciphering fossil footprints and traces**

Almost like being there. Deciphering what traces mean is all part of the fun. We see dinosaur "muddy boots" splodge prints and dino burrows. We see traces of shrimps, insects and giant termite nests, and then lobster trackways showing how little has changed in the mangroves over the last 20M years. By Dr Jon Noad of Calgary.

### Volcanic activity up close or "The drizzle burns my eyes and throat"

Fascinating talk by Icelandic vulcanologist Dr Evgenia Ilyinskaya on plumes of volcanic gasses and aerosol particles in the environment and the atmosphere. Evgenia has worked on fissure eruptions in Iceland, Central America, Hawaii, Antarctica and Japan, using drones to track plumes of air pollution in regions bathed in haze. She talks of eyes itching and stinging in the blueish smelly mist, SO<sub>2</sub> gases, heavy metal pollution, pea-soupers in the 1950's UK, crop failures following a 1783 eruption and other volcanic events.

#### Where to find rich fossil beds

Macrofossils can be found in almost every sedimentary environment, but the relative abundance and distribution of these fossils varies widely. Dr Jon Noad of Clagary Uni explores the impact of factors on preservation like the robustness of the organism, cementation, and weathering profiles.

#### The Rise and Fall of the British-Irish Ice Sheet

It is estimated that the kilometre-thick ice-sheet to have been large enough, at its maximum extent, to raise sea level by 1.8 metres once it had melted. Prof Chris Clark explores how a new reconstruction with high-resolution bathymetric and seismic data confirms widespread advance of the ice to the edge of the continental shelf.

#### **Secret Life of Crinoids**

Crinoids are strange-plant-like animals, and are probably the ancesters of all starfish-like animals on the planet. Today, their stalkless free-living relatives dominate modern coral reefs. Dr Aaron Hunter will look at the geological history of the crinoid, how they survived the Permo-Triassic mass extinction to thrive in shallow water lagoons and seas of the Jurassic.

### The Winchcombe meteorite

In March 2016, there was lots of media coverage of a huge fireball over the UK. Five years later, Jim Rowe and his collaborators had their persistent search rewarded with the recovery of the Winchcombe meteorite: one of the most important events of its kind in the UK for over 400 years, and something that might have some international space agencies scratching their heads about the cost-effectiveness of their sample-recovery missions. By Ashley King

# The age of sea lilies & rainforests - Life in a Carboniferous World

Laurussia was a major continent straddling the Carboniferous equator, extending from the present-day Urals to the West coast of N. America; there was no Atlantic Ocean. This talk by Dr Nick Riley MBE will focus on the fundamental changes in the biosphere during the Carboniferous in the aftermath of the Permo-Carboniferous glaciation.

### **Geothermal Resources of the UK**

Some 25% of the UK population lives above flooded coal mines as a result of UK's industrial legacy. These mines might create an opportiunity for attractive geothermal for low-carbon heating. However, despite its large potential, this is still a relatively untapped resource in the UK. By Dr Catherine Hirst

### A journey from Lilliput to Brobdingnag

The Brobdingnag effect is coined for size increase within a newly originated species in the aftermath of mass extinction; it refers to the the giants in Swift's Gulliver's Travels. Apparentlry, the size increase appears to result from greater longevity and faster growth rates. Jed Atkinson traces bivalve mollusc body size trends across the end-Triassic mass extinction and their recovery.

### Pushing back the boundaries of early life

The Barberton Greenstone Belt of South Africa, laid down 3.20 billion years ago or more, and now a UNESCO world heitage site, provides a rare window into diverse and widespread ancient microbial ecosystems. These remnants of microbial mats and biofilms are arguably the oldest traces of ancient life. By Dr Martin Homann

# Rise of the Continents episode 2 - Australia

Professor Iain Stewart uncovers the mysterious history of Australia, and shows how Australia's journey as a continent has affected everything from Aboriginal history to modern-day mining, and even the evolution of Australia's bizarre wildlife, like the koala.

### Rise of the Continents episode 3 - The Americas

Geologist Iain Stewart reconstructs how North and South America were created. Professor Iain Stewart uncovers clues hidden within the New York skyline, the anatomy of American alligators and inside Bolivian silver mines, to reconstruct how North and South America were created.

### Rise of the Continents episode 4 - Eurasia

Professor Iain Stewart shows that where the south of Eurasia is today there was once an ocean and how, in 250 million years, all of the continents will collide together. 200 million years ago the continent we know as Eurasia – the vast swathe of land that extends from Europe to Asia – didn't exist.

#### The real T Rex

15 Chris Packham goes on an investigative journey into the mysteries of planet Earth's super predator - Tyrannosaurus rex. The latest groundbreaking paleontological discoveries combined with studies of modern animals are redefining this iconic dinosaur.

### Mammoth graveyard

David Attenborough joins an archaeological dig uncovering Britain's biggest mammoth discovery in almost 20 years. In 2017, in a gravel quarry near Swindon, two amateur fossil hunters found an extraordinary cache of Ice Age mammoth remains and a stone hand-axe made by a Neanderthal.

#### Attenborough and the giant dinosaur

David Attenborough tells the story of the discovery and reconstruction in Argentina of the world's largest-known dinosaur, a brand new species of titanosaur.

### A dinosaur graveyard

18 Liz Bonnin joins an international team of palaeontologists in the remote badlands of Wyoming as they investigate a mysterious dinosaur graveyard.

## 19 Helen Czersky on Icebergs

### 20 Helen Czersky on Volcanos

# 21 Helen Czersky on Avalanches