# Prime Meridian (73) June 15, 2017

# Frontiers of Survival

## A series of free public talks for late summer 2017

Talks will outline a pioneering astrobiology initiative launched by the Ecospheres Project. They will look at the significance of forests on Earth and why we should be looking for other forested worlds.

SEPT. 14, 2017: GUEST SPEAKER DR. LAURANCE R. DOYLE

# "It could be that the first detection of extra-terrestrial life will be forests"

Statement by Dr Laurance Doyle of the Ecospheres Project, updating a congressional hearing on May 9, 2013.



Dr Laurance R. Doyle (at left), a Principal Investigator at the Center for the Study of Life in the Universe, SETI Institute (which he was representing), outlined the state-of-the-art in the hunt for other Earths. Washington DC, USA.

Also giving evidence were Dr John M. Grunsfeld, veteran astronaut and, Associate Administrator of the Science Mission Directorate, NASA (centre) Dr James Ulvestad, Director of the Division of Astronomical Sciences, National Science Foundation (right).

"Forests are essential for understanding our habitable Earth and they could become astrobiology's biggest adventure." Dr Martin J. Heath, Ecospheres Project.

WHEN: August 3 to September 21, 2017. 7:30-9:30 pm.

WHERE: London, UK. The Lodge, National Sports Centre, Crystal Palace Park, SE19.

Frontiers of Survival will explore the opportunities and challenges for life in the universe, focussing on forests. It takes us from the woods and hedgerows of southern England to the farthest galaxies spied by the Hubble Space Telescope as it discusses future directions for astrobiology and how our perceptions of our home world could be transformed.

Each talk will be self-contained and will assume no prior technical knowledge. Members of the public are invited to come to as few or as many lectures as they like.

# **SCHEDULE**

The first six evenings will be presented by Dr. Martin J. Heath of the Ecospheres Project.

1. Forests and how they made us what we are.

#### August 3.

- i) Forests and the Earth as a living planet.
- ii) Our origins in the trees and how forests enabled civilisation.





August 10.

- ii) Key concepts: ecosystem, niche, Habitable Zone and Drake Equation.
- iv) Where do forests thrive on planet Earth?

Image: Ariel Steine. Temperate broadleaf and mixed forest in Diqing Prefecture, Yunan, southwest China. CC BY 2.5.

### 2. Zones of life & zones of death.

#### August 17.

- v) Of forests, stars and planets.
- vi) How do forests fit into the Habitable ("Goldilocks") Zone?

Image: NASA Ames/JPL-Caltech/T. Pyle. Kepler-186b.





#### August 24.

- vi) Forests, seasons and superseasons.
- vii) Other planetary systems dangers and opportunities.

Image: Planetary collision around a young star HD 172555. Credit: NASA/JPL-Caltech.

## 3. Re-making the world.

#### August 31.

- ix) Forests, the Anthropocene and the global crisis.
- x) Planetary stewardship, geoengineering and catastrophe.

Image: Slash and burn in Brazil. United States Forest Service. Public domain.





#### September 7.

- xi) Bio-tech and future forests.
- xii) Forests and Galactic colonisation.

Image: wallup.net.

# 4. Special lectures.

September 14.

The search for other forested worlds - the coming decades.

Guest speaker: Dr. Laurance R. Doyle of the SETI Institute, Mountain View, CA, USA. NASA Kepler science team.



Image credit: SETI Institute.



September 21.

Down to Earth - how you can make a difference for wildlife.

i) Acorns to oaks: ecology in our local landscape.

Dave Clark, ornithologist.

ii) The Great North Wood - South London's forgotten landscape.

Sam Bentley-Toon, London Wildlife Trust.

Left: Sydenham Hill Wood, South East London, in May, 2017.

Background: Stellarium

#### Prime Meridian

This newsletter is published by the Ecospheres Project, a trans-Atlantic research and media collaboration. It follows global environmental issues alongside the cycle of the seasons in South East England. It steps back to look at the Earth in its astronomical context and it pursues the search for other habitable worlds.

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