

**Toby Kiers, world-renowned evolutionary biologist best known for her studies on underground fungal networks, to deliver Earth Day lecture on Apr. 20**

[Toby Kiers](#), a University Research Chair and Professor at Vrije Universiteit Amsterdam, well-known for her work in the fungal networks that connect plants, will deliver the 2022 Earth Day Lecture on Wednesday, April 20<sup>th</sup> at 3:10pm CT. Kiers' talk is titled, "Underground economics: Quantifying trade in plant-fungal networks" and is part of the 2022 seminar series presented by the Vanderbilt University [Evolutionary Studies Initiative](#). The virtual talk is free and open to the public. [Registration is required](#).



Kiers is an American-born evolutionary biologist working in the Netherlands. She graduated from Bowdoin College in Maine in 1999, during which time she also studied at the Smithsonian Tropical Research Institute (1997). Kiers obtained a Ph.D. in Evolutionary Biology from the University of California, Davis, USA, in 2005. Kiers got her start studying plants in Panama and Japan before landing in the Netherlands. Her current work mostly focuses on the underground fungal network and its similarities to economic networks.

Research description from [her website](#):

Hidden from our eyes, plant roots are colonized by a fungus called arbuscular mycorrhizae. The roots and fungi form complex underground networks to exchange essential resources. Unlike in human economies, that rely on cognition to make decisions, traders in this underground market bargain, borrow, and cheat – all in the absence of thought. Our aim is to understand how organisms (without brains) evolve different trading strategies. How does a fungus sense local nutrient conditions, and make complex calculations about when and where to trade? How is this information integrated across the network? We develop tools to visual monitor where and when trade takes place across plant-fungal networks.

In 2015, Kiers received the Bio Art and Design (BAD) award in collaboration with artist Isaac Monté. In 2019, Kiers was recognized as a laureate of the Ammodo Science Award in Natural Sciences. Also in 2019, Kiers [gave a TED talk](#) titled "Lessons from fungi on markets and economies." She also started an organization dedicated to preserving biodiversity hotspots and teaching the general public about underground networks – the Society for the Protection of Underground Networks (SPUN).

Tags: Evolution, Earth Day Lecture, Seminar

---

About ESI: The Evolutionary Studies Initiative at Vanderbilt aims to unite a remarkably diverse array of scholars from diverse disciplines with broad interests and expertise in evolution-related fields. Scholars integrate evolution with anthropology, neuroscience, psychological sciences, economics, education, law, language, paleontology, education, ecology, and medicine, to name just a few. Evolution not only provides the scaffold on which many of these fields are built, but its concepts and tools constitute the very means by which people study virtually everything that contains the words human, behavior, culture, and increasingly policy.

###