

# 32<sup>th</sup> FEFCO

Forest Ecosystem Function Colloquium (FEFCO) は、地域や地球全体のレベルで森林生態系の機能とその持続的活用法を統合的に理解することを目的とし、研究者間の学術交流を推進します。

第32回森林生態系機能コロキウムはミネソタ大学のJeannine Cavender-Bares教授にご講演いただきます。京都大学農学研究所熱帯林環境学分野がホストを務めます。

32<sup>th</sup> FEFCO  
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Faculty of Agriculture Main Building, S174  
Dr. Jeannine Cavender-Bares  
University of Minnesota

## Evolutionary legacies on ecosystems: implications for managing Planet Earth in the Anthropocene

The Earth's biodiversity is undergoing unprecedented changes and extinction in the Anthropocene with fundamental consequences for human well-being. What steps would we take if wanted to manage Planet Earth intentionally for sustainability in this era of global change? The challenge before us requires integration of human dimensions with 1) solid understanding of ecological and evolutionary processes that can guide ecosystem restoration and management and 2) vigilant tracking of ecosystems and biodiversity at the global scale. In this talk, I discuss several insights from the perspective of an evolutionary ecologist relevant to managing planet Earth for sustainability. These include: 1) the contrasting nature of human perspectives for managing trade-offs in ecosystem services, 2) the consequences of past evolutionary and biogeographic processes (evolutionary legacy effects) for community assembly and ecosystem function, and 3) the use of hyperspectral remote sensing methods integrated with in situ measures of biodiversity and ecosystems to monitor changes in our life support systems. My goal is to consider how the work we do as natural scientists can contribute to the larger dialogue on meeting human needs while maintaining our life support systems.