

(セミナーのお知らせ)

演題： Protection of European vegetation from ozone

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日時：5月19日(水) 13:00 ~ 15:00

場所：東京大学大学院農学生命科学研究科 7号館 A棟 7階 会議室

Ozone is a strong phytotoxic air pollutant, and is also recognized as a significant greenhouse gas. Although many questions remain, we now know a great deal about how ozone affects vegetation at the cell/leaf level (by inducing a cascade of biochemical, physiological and morphological responses) and at the plant/canopy level (by affecting allocation and carbon strength, reproduction, hydrology, and the response to co-occurring stressors). Gas exchange measurements carried out at steady state suggest ozone reduces stomatal conductance and thus increases protection from drought and additional ozone. Ozone, however, may impair stomatal control and predispose trees to drought stress under dynamic conditions. In addition, species-specific and individual-specific responses to ozone affect forest competition and biodiversity. There is a need to scale from the cell and leaf level up to the ecosystem and regional level, and to develop a biologically significant and usable standard to protect vegetation from ozone. Europe is moving from the exposure-based index AOT40 to a flux-based index, i.e., the stomatal uptake of ozone. Major challenges to the development of an air quality standard for ozone that has both biological significance and practicality in usage will be analysed.



Elena Paoletti: She is a forest ecophysiologicalist and works in particular with the impacts of air pollution and climate change on forest ecosystems. She coordinates the IUFRO (International Union of Forest Research Organizations) Research Group 7.01.00 “Impacts of Air Pollution and Climate Change on Forest Ecosystems” and the SISEF (Italian Society of Silviculture and Forest Ecology) Working Group “Pollution and Forests”. She is vice-president of SISEF. Invited speaker or chairperson at several scientific meetings, she was member of the organizing/scientific committee of 28 meetings. Reviewer of project proposals (European Union; Czech Science Foundation; Academy of Finland; United States - Israel Binational Agricultural Research & Development Fund; Fundaci3n BBVA of Spain), journal manuscripts (on average, 14 reviews a year) and reports (Canadian

Smog Science Assessment), she is member of the Steering Group of the Network “Ozone risk assessment”, and of the Editorial Board of the journals *Forest@* and *Environmental Pollution*. Principal investigator in 15 scientific projects and Chair of the COST Action FP0903 “Climate Change and Forest Mitigation and Adaptation in a Polluted Environment”, she is author of more than 170 papers.

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