



# CAES

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## LOCKWOOD LECTURE

# “The Greening of the Arctic: How Shrubs Are Changing the Tundra”



**Jennie R. McLaren, PhD**

Assistant Professor

Department of Biological Sciences

University of Texas at El Paso

**Tuesday, April 4, 2017**

Tea: 10:30 a.m., Lecture: 11:00 a.m.

**Jones Auditorium, The Connecticut Agricultural Experiment Station  
123 Huntington Street, New Haven, CT**

Since 1960, arctic regions have been warming at a rate two to three times faster than the global average, with a diversity of biological and physical responses. One of these responses has been a “Greening of the Arctic,” resulting from increased vegetation productivity in northern ecosystems, in particular increases in the abundance and cover of deciduous shrubs. This “shrubification” is likely to affect the functioning of arctic ecosystems, including changes to thermal regimes, soil nutrient cycling and the rest of the plant community. Increasing shrubs in the living plant community, also increases the proportion of shrub litter in the litter community which has the potential to change patterns of decomposition in the Arctic. Arctic soils contain 25% of the world’s soil carbon, primarily as a result of slow decomposition resulting from cold year-round temperatures in the Arctic, and changes to these processes have the potential to affect the global carbon cycle. Dr. McLaren will discuss results from field experiments which describe how increasing shrub litter, under various scenarios, has the potential to both increase and decrease rates of carbon release from arctic ecosystems.

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