

Bergren Forum opens with 'Acid Rain Revisited'

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"Acid Rain Revisited" is the topic Dr. Michele Hluchy, professor of geology and chairman of the Environmental Studies Department at Alfred University, will explore during the opening program of the Bergren Forum for the fall semester 2006, on Thursday, Sept. 7, at 12:10 p.m. in the Nevins Theatre, Powell Campus Center. Hluchy will speak about the research she has been involved in over the past year. That work was funded by a nearly \$1 million, four-year National Science Foundation (NSF) grant awarded to Hluchy and three Colgate University professors. The grant is one of the largest NSF grants obtained by Alfred University, and the largest ever for Colgate. Acid precipitation results from emissions released during the burning of fossil fuels. In the northeastern United States, many of these emissions come from coal-fired power plants in the Midwest. The airborne emissions are carried by the prevailing winds, which blow from west to east, and as they rise over the mountains, they are incorporated into rain and snow that condense in the cooling air masses. The sulfur dioxide released by the burning coal becomes sulfuric acid, and the nitrogen oxide released during petroleum combustion becomes nitric acid. As the clouds become saturated, they release the moisture in the form of rain, snow or fog. The Adirondack region of New York State receives some of the most acidic precipitation in the United States. Hluchy explained that the sulfuric and nitric acids in the precipitation combine with base cations in soil and water. Base cations are positively charged ions of alkali or alkaline earth metals, such as sodium, potassium, calcium and magnesium, which naturally buffer acids in the soils and are used as nutrients by plants and animals. The AU-Colgate team is looking at levels of calcium and how its availability in soils and surface waters affects organisms, said Hluchy. The Bergren Forum, sponsored by the Alfred University Division of Human Studies, meets Thursdays during each academic semester. Participants are encouraged to bring a lunch; coffee and tea will be available.