

Research Focuses On Acid Rain

By Kathy S. Smith and Jill Baron

Recent investigation into the status of acid rain research showed that NPS personnel at all levels are active in surveying and assessing problems. A number of NPS areas are looking into the processes by which change may be expected to occur; Rocky Mountain, Shenandoah, Great Smoky Mountains, Sequoia, Isle Royale, and Voyageurs are among the parks which have intensive studies asking the question of *how* acid rain damage might occur.

Research emphasizes soil and bedrock weathering, and effects on aquatic biotic and abiotic systems. Work investigating effects to terrestrial vegetation is limited, however, as basic research now underway by other agencies progresses, new methods will allow evaluation of vegetation — a prime Park resource. The importance of future terrestrial studies is stressed by new evidence from Germany which postu-

lates forest to be in a state of advanced decay as the result of decades of nutrient leaching by acidic rainfall and heavy metal deposition. Is this a future park issue?

NPS cultural resources staff also are aware of the risk to diverse materials under their care. Unfortunately, knowledge of actual effects on historical resources lags far behind our presently incomplete and often contradictory knowledge of biological effects. Progress is being made, however.

The National Park Service is involved, through the Office of Historic Architecture, in materials effects and in restorative research, finding protective coatings, or "sacrificial layers" which will save the important structures underneath.

A national debate is underway! Acid precipitation is a reality! At risk are ecosystems, monuments, forests, buildings, and

a number of aquatic and fish species. Sensitive National Park areas represent protected natural systems where the potential changes due to acid rain must be understood.

Additional information regarding acid rain, what it is, what it does, and where it comes from is available in the report entitled "Status Report: Acid Rain Research in the National Park Service 1982" is a Water Resource Field Support Laboratory publication, WRFSL Report No. 82-1 and is available from the Lab, 107C Natural Resources, Colorado State University, Fort Collins, CO 80523.

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