

Late in August, the U.S. and Canada signed an agreement to co-sponsor a study that will simulate the movement of airborne pollutants that cause acid rain. The October issue of *Discover* described briefly the six-week study that began in September 1982 and is named Captex (for cross-Appalachian tracer experiment) and that is expected to help resolve the U.S./Canada dispute over who is exporting acid to whom.

In the same issue, Jamie James examines the whole problem, under the title, "Who Will Stop the Acid Rain?" Many an unsolved question with regard to acid rain is explained in lay terms. For instance, scientists *believe* that tree kills result primarily from the acid in rain reacting chemically with clay soils to release aluminum and potassium – metals toxic to the fine root systems of trees. The metals are then carried into water bodies, where they kill aquatic life. Fish, it seems, are extraordinarily vulnerable to aluminum poisoning.

One worrisome aspect is raised by William Ackermann, professor of civil engineering at the University

of Illinois. Ackermann says increased acidity may be dangerously disturbing the microorganisms in soil. These are the life forms that constitute the bottom of the food chain, where dead plants and animals are turned back into the nitrogen and carbon essential for building new life. In effect, Ackermann suggests that acid rain may be unraveling one end of the food chain, upon which virtually all known life depends.