

Health Science

THE BOSTON GLOBE MONDAY, JANUARY 16, 2006

Medical Help Wanted
Deaths
Weather

C
C2
C5
C8

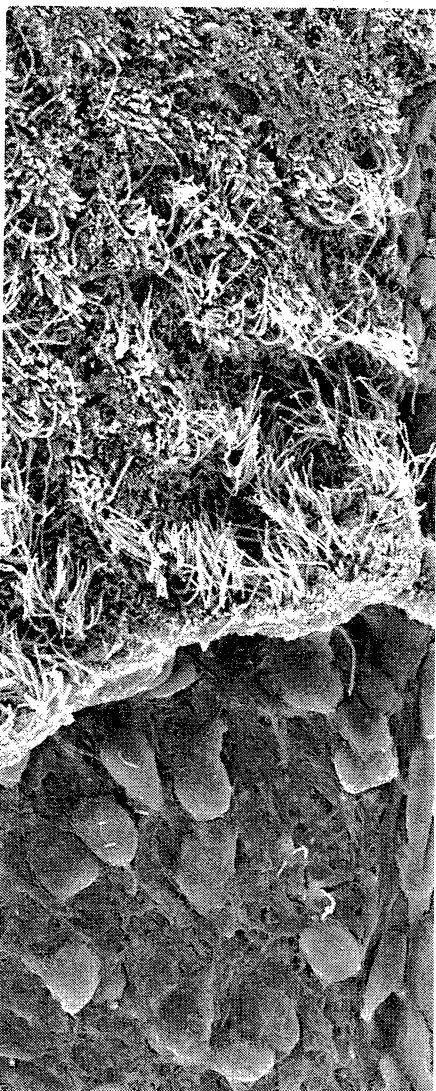
GLOBAL WARMING

Maybe Reagan was right: Trees release greenhouse gas

Say "methane" and many people think of a swamp or the tail-end of a cow. But scientists have been puzzled by satellite images showing clouds of this potent greenhouse gas above tropical forests. Why there? It had been thought that oxygen-depleted wetlands and, yes, the flatulence of animals produce most naturally occurring methane. Now, Frank Keppler at the Max Planck Institute in Germany and his European colleagues have made a startling discovery: Living plants spew large amounts of methane into the atmosphere. Their results suggest that 10 to 30 percent of annual releases come from trees and other plants, toppling the belief that methane can't form in the presence of oxygen. Their discovery may also help explain why atmospheric methane levels have dropped in recent years: forests are being leveled across the planet.

BOTTOM LINE: This study raises the ugly possibility that new forests accelerate global warming through methane emissions rather than slow it down by soaking up carbon dioxide. But it's too soon to tell, or to revise policies intended to reduce greenhouse gases. "We don't know how significant these emissions are compared to the carbon dioxide uptake by plants," says David Lowe, who authored a companion article to Keppler's.

CAUTIONS: This is the first research of its kind. It



DR. ARTURO ALVAREZ-BUYLLA/SCIENCE EXPRESS/AAAS

MOVING IN STEP — This electron microscope image shows a line of neurons moving through the brain on a delicate current of cerebrospinal fluid. The current was discovered as a part of research into how cells in a developing brain travel to the places they are needed.

awaits confirmation by other scientists. Also, the amount of global methane is notoriously difficult to measure, so the relative importance of this new source is not clear. And don't start cutting forests to slow global warming. "I suspect the amount of carbon drawn from the atmosphere by trees is colossal," Lowe says, "while the role of methane in the Earth's carbon cycle is tiny."

WHAT'S NEXT: Political controversy is sure to follow any revision of the mechanisms of global warming.

While policymakers scramble to make sense of this unexpected source of greenhouse gas, scientists will be wondering how they overlooked a worldwide source of methane and working to understand how plants produce it.

WHERE TO FIND IT: Nature, Jan. 12, 2006

JOSHUA BROWN