

Rocky Mountain News

To print this page, select **File** then **Print** from your browser

URL: http://www.rockymountainnews.com/drmn/local/article/0,1299,DRMN_15_3238944,00.html

Current drought a wimp

Tree-ring research shows West's history of 'megadroughts'

By **Jim Erickson, Rocky Mountain News**

October 8, 2004

The multiyear drought still plaguing much of the West pales in comparison to decades-long "megadroughts" that seared the region over the past 1,200 years and could return in the future.

That's the conclusion of researchers who pieced together an unprecedented regional drought record from tree rings sampled at hundreds of sites across the West.

Advertisement

COLLEGEAMERICA
Established in 1964
1-800-97-SKILLS • www.CollegeAmerica.com

Career-oriented training that leads to careers in Business, Medical Specialties and Technology

The new record is the most comprehensive reconstruction of Western drought to date, extending previous efforts by 900 years.

The new record sheds light on a drought-prone 400-year period between A.D. 900 and 1300.

It is punctuated by four decades-long, nationwide megadroughts centered on the years 936, 1034, 1150 and 1253.

"With all the concern about the current drought, you would like to think that, gee whiz, we ought not expect to see this one almost ever again," said tree-ring expert Edward R. Cook of Columbia University. He is lead author of a report in Friday's edition of the journal *Science*.

"And yet, in comparison to those four periods of megadrought in that 400-year interval, we haven't seen anything yet," Cook said. "Things could be much worse, and there's no reason to argue that it couldn't happen again."

Connie Woodhouse and C. Mark Eakin of the National Climatic Data Center in Boulder were co-authors.

The annual growth rings of trees such as ponderosa and piñon pines and Douglas firs vary in thickness

depending on the amount of rain that falls during the growing season. The rings are relatively thick in wet years and vanishing thin during droughts.

The latest study compiles tree-ring records from more than 600 sites across the West.

The 400-year droughty period in the West roughly coincides with a sustained balmy era in Europe, Scandinavia, Greenland, North America and elsewhere known as the Medieval Warm Period.

The researchers suggest that the medieval warming could have, paradoxically, triggered a cooling of eastern Pacific surface waters known as La Niña.

La Niña conditions are linked to drought in the West.

Cook and his colleagues suggest that future warm periods - caused either by natural climate variability or the buildup of heat-trapping greenhouse gases linked to the burning of fossil fuels - could trigger the type of Western megadrought that hasn't been seen in 700 years.

Robert Webb of the U.S. Climate Diagnostics Center in Boulder called the Cook team's tree-ring record "the most comprehensive reconstruction of drought in the Western U.S. to date."

But the suggested links between the Medieval Warm Period, greenhouse warming and future megadroughts is flimsy, he said.

"They're going out on a speculative limb," Webb said. "We don't really have that good an understanding of that 400-year (warming) period . . . and the analogy to greenhouse warming is tenuous."

Much of the current Western drought, which began in 1999, occurred during a La Niña.

Recently, weak-to-moderate El Niño conditions have developed. El Niño is a warming of the eastern Pacific tied to wet winters in the Southwest.

Though the drought has eased over Colorado's Front Range, severe to extreme drought persists in far western Colorado and across most of Utah, Wyoming, Nevada and Arizona, according to the federal Drought Monitor.

Copyright 2004, Rocky Mountain News. All Rights Reserved.