

Welcome to TimesPeople
What's this?

Share and Discover the Best of NYTimes.com

7:30 AM

Log In or Register
No, thanks

HOME PAGE MY TIMES TODAY'S PAPER VIDEO MOST POPULAR TIMES TOPICS

Get Home Delivery | Log In | Register Now

The New York Times

Science

Search All NYTimes.com

Go

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION ARTS STYLE TRAVEL JOBS REAL ESTATE AUTOS

ENVIRONMENT SPACE & COSMOS

TOUGH TIMES CALL FOR TOUGHER WORKOUTS

That's why we're making it easier than ever to join: no enrollment, no dues for November, 10% off personal training

www.crunch.com Feedback - Arts by Google

Bark Beetles Kill Millions of Acres of Trees in West



Anne Sherwood for The New York Times

DEADLY Montana has lost a million acres of trees to mountain pine beetles that burrow into bark and block nutrients.

By **JIM ROBBINS**
Published: November 17, 2008

HELENA, Mont. — On the side of a mountain on the outskirts of Montana's capital city, loggers are racing against a beetle grub the size of a grain of rice.

From New Mexico to British Columbia, the region's signature pine forests are succumbing to a huge infestation of mountain pine beetles that are turning a blanket of green forest into a blanket of rust red. Montana has lost a million acres of trees to the beetles, and in northern Colorado and southern Wyoming the situation is worse.

"We're seeing exponential growth of the infestation," said Clint Kyhl, director of a Forest Service incident management team in Laramie, Wyo., that was set up to deal with the threat of fire from dead forests. Increased construction of homes in forest areas over the last 20 years makes the problem worse.

In Wyoming and Colorado in 2006 there were a million acres of dead trees.

Last year it was 1.5 million. This year it is expected to total over two million. In the Canadian provinces of British Columbia and Alberta, the problem is most severe. It is the

More Articles in Science »

Breaking News Alerts by E-Mail

Sign up to be notified when important news breaks.

[Privacy Policy](#)

Buy the skin care product

Invented
made
marketed
& **Loved**
by Scientists

Gombrey
SOLENE

MOST POPULAR

E-MAILED BLOGGED SEARCHED

1. Dick Cavett: The Wild Wordsmith of Wasilla
2. Op-Ed Contributor: Let Detroit Go Bankrupt
3. David Brooks: The Formerly Middle Class
4. Bark Beetles Kill Millions of Acres of Trees in West
5. Practical Traveler: Unused Frequent-Flier Seats in a Flash
6. Op-Ed Contributor: The Test Passes, Colleges Fail
7. Web Sites That Dig for News Rise as Watchdogs
8. Saving the Story (the Film Version)
9. Big City: 12-Year-Old's a Food Critic, and the Chef Loves It
10. A Sea of Unwanted Imports

[Go to Complete List »](#)

RSS Feed

Get Science News From The New York Times »

[Enlarge This Image](#)



Anne Sherwood for The New York Times

HARDY The beetles inject a fungus to stop the tree from moving sap. Many forests are being cut before the trees fall.

SIGN IN TO E-MAIL OR SAVE THIS

PRINT

SINGLE PAGE

REPRINTS

SHARE

ARTICLE TOOLS SPONSORED BY
From Director
Danny Boyle

The New York Times

THEATER
nytimes.com/theater

Welcome to TimesPeople
What's this?



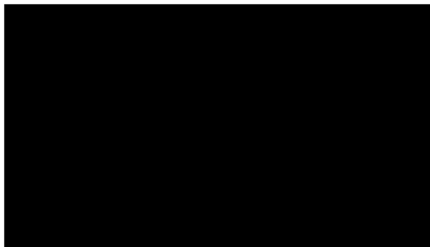
Share and Discover the Best of NYTimes.com

7:30 AM

Log In or Register
No, thanks

VIDEO »

[More Video](#) | [Multimedia](#) »



00:00 06:39

▶ PLAY



SCIENCE

America's Disappearing Forests

The mountain pine beetle, an insect pest, is destroying massive swaths of American lodgepole pine.

largest known insect infestation in the history of North America, officials said. British Columbia has lost 33 million acres of lodgepole pine forest, and a freak wind event last year blew mountain pine beetles, a species of bark beetle, over the Continental Divide to Alberta. Experts fear that the beetles could travel all the way to the Great Lakes.

In the next three to five years, Mr. Kyhl said, virtually all of Colorado's lodgepole pine trees over five inches in diameter will be lost, about five million acres. "Already in many places, every lodgepole over five inches is dead as far as the eye can see," he said.

Foresters say the historic outbreak has several causes. Because fires have been suppressed for so long, all forests are roughly the same age, and the trees are big enough to be susceptible to beetles. A decade of drought has weakened the trees. And hard winters have softened, which allows the beetles to flourish and expand their range.

Hoping to keep their forests from completely dying, to earn money by selling dead and infected trees and to mitigate fire risks, landowners are scrambling to cut the pines. If enough are cut — up to 75 percent — it might leave some behind that, with less competition for water, can survive. Still, for many landowners, cutting most of the forest where they have built their homes is painful. "I've literally had people in my office crying," said Gary Ellingson, a forestry consultant for Northwest Management.

The black, hard-shelled beetle, the size of a fingertip, drills through pine bark and digs a gallery in the wood where it lays its eggs. When the larvae hatch under the bark, they eat the sweet, rich cambium layer that provides nutrients to the tree. They also inject a fungus to stop the tree from moving sap, which could drown the larvae. That fungus stains the wood blue.

"The Latin name is *Dendroctonus*, which means tree killer," said Gregg DeNitto, a Forest Service entomologist in Missoula, Mont. "They are very effective."

To fend off the bugs, trees emit white resin, which looks like candle wax, into the beetle's drill hole. Sometimes the tree wins and entombs the beetle. Often, though, the attacker puts out a pheromone-based call for reinforcements and more of the beetles swarm the tree. In a drought the tree has trouble producing enough resin, and is overwhelmed.

There are some defenses. Owners nail to a tree an "aggregator pheromone" in a small packet, which mimics the chemical scent given off by beetles when a tree is full of insects. It can work when beetles are not too numerous, but at some point the beetles are not deterred.

Large, old, high-value trees, ones that shade campgrounds or yards, can be sprayed with an insecticide. But the trees need to be sprayed from the base to the height at which it is less than 4 inches around. Each tree costs about \$10 to \$15 if hundreds are sprayed.



Chris Noth in "Farragut North"

Also in Theater:

[Katie Holmes](#) in "All My Sons"

[Jeremy Piven](#) in "Speed-the-Plow"

[Holiday season openings](#)

ADVERTISEMENTS

Need to know more?

Get 50% off home delivery of The Times.

Citi never sleeps™



nytimes.com/opinion

Where the conversation begins ▶



Will their
opinions
change
yours?



Advertise on NYTimes.com

Ads by Google

what's this?

1 flat stomach rule: obey

I cut out 2 lbs of stomach fat per week by obeying this 1 old rule.

[CathysWeightLoss.com](#)

1 | 2 [NEXT PAGE »](#)

A version of this article appeared in print on November 18, 2008, on

Welcome to TimesPeople
What's this?

Share and Discover the Best of NYTimes.com

7:30 AM

Log In or Register
No, thanks

page D3 of the New York edition.

[More Articles in Science »](#)

Enjoy the convenience of home delivery of The Times for less than \$1 a day

Ads by Google

[what's this?](#)

Fire Rescue

100% online fire science degree program. Get more info & enroll.
www.APUS.edu/FireScience

Find Inspection Software

The Top Industrial Resource. Find Inspection Software Quickly.
Industrial101.com

Fire Inspection Software

Inspections, Permits, Violations Codes, Billing, Mobile Devices
www.rlsdata.com

Past Coverage

- [OBSERVATORY: The Beetle Factor In a Carbon Calculus \(April 29, 2008\)](#)
- [Pine Bark Beetle Infestation Is Causing a Rocky Mountain Low \(December 29, 2007\)](#)
- [WARMING TRENDS: A Beetle and Balmy Weather May Bench a Baseball Staple \(July 11, 2007\)](#)
- [As Beetle Threatens, 10,000 Staten Island Trees Die by Chain Saw \(June 9, 2007\)](#)

Related Searches

- [Forests and Forestry](#) [Get E-Mail Alerts](#)
- [Insects](#) [Get E-Mail Alerts](#)
- [Trees and Shrubs](#) [Get E-Mail Alerts](#)

INSIDE NYTIMES.COM

TELEVISION »



'Project Runway' Is Frozen on the Catwalk

DINING & WINE »



Flavorful Gravy Makes Thanksgiving

BUSINESS »



California Port Overrun by Unsold Foreign Cars

OPINION »

Campaign Stops: Rx for Banks

An analysis of what Barack Obama should do to renew the health of the banking system.

U.S. »



Homeless in a Flash, Hundreds in Texas Wait

OPINION »



Measure for Measure: Anatomy of a Flop