This month:

January 2006

Table of Contents

Editorial

Columns

Features

Editorial Advisory Board

Today:

The Daily:
Sign up for The Scientist's daily e-mail.

Blogs:
Latest Posts

This week:

Podcast:
TheWeek

Now on iTunes
subscribe now

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Media Kit

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By Melissa Lee Phillips (mlp@nasw.org)

NEWS

Wildfire logging debate heats up

Controversial *Science* paper lacked appropriate caveats, some forestry scientists say

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Nine scientists wrote a letter to *Science* asking the journal to withhold a one-page article on the potential risks of post-wildfire logging, arguing the article was short on qualifiers and context. But some forestry scientists say they support the conclusions, and last week, the journal published the paper.

In a letter dated January 17, nine scientists, including six from Oregon State University (OSU) in Corvallis, sent a letter to editors at *Science*, claiming that a paper from OSU forest science masters student Dan Donato and colleagues on the negative effects of logging since the 2002 Biscuit Fire in southwest Oregon was incomplete, misleading, and presented no new science.

Three of the letter co-signers are employees of the U.S. Forest Service, which has expanded post-fire logging in Oregon with support of the Bush administration.

According to co-signer John Sessions, distinguished professor of forestry at OSU, the Donato *et al*. paper omitted crucial information about area environmental conditions and did not provide data to support conclusions that post-wildfire logging may be detrimental to forest health. "We requested that the data be presented," said Sessions, "or, alternatively, that our concerns about the peer-review process be published" alongside the paper in the January 20 print version of *Science*. Editors at *Science* refused both requests, Sessions said.

Donato and his co-workers collected data on regeneration of conifer seedlings in fire-affected areas, some of which were logged after the fire. Forestry scientists have proposed that logging immediately after wildfires—called salvage logging—can reduce long-term fire risk by removing dead wood likely to burn. Also, many forest managers believe that salvage logging and re-planting seeds are necessary

steps for adequate forest regeneration following fires, Sessions said.

However, Donato and his co-workers found what they call "abundant" natural regeneration in the area they studied, with a median of 767 conifer seedlings per hectare two years after the fire. In sites where salvage logging had taken place, they found just 224 seedlings per hectare. They suggest that soil disturbance and materials left behind during logging reduced the seedlings' survival.

The authors also found that logged areas contained significantly more flammable wood – mainly branches that could not be sold -- than areas left alone, and that this wood may increase future fire risk. They conclude that salvage logging "can be counterproductive to goals of forest regeneration and fuel reduction."

According to Sessions, neither the paper nor the accompanying online material provided information about "logging system, soil type, plant associations, slope, aspect, elevation, precipitation—none of the things that we would typically think another researcher would need to know to understand the study."

Without this information, it's difficult to assess the significance of the study's results, said Steve Tesch, head of forest engineering at OSU, who also signed the letter to *Science*. For example, springs in southern Oregon have been unusually wet since the Biscuit Fire, Tesch said, so "it's not surprising at all that there are some germinating seedlings." However, these seedlings are still small and vulnerable to dry weather, drought, and insect and rodent infestation, Tesch said. "You couldn't draw conclusions about reforestation success for at least five years and, more likely, you'd be unsure for ten to 15 years," Tesch said.

But not all ecologists agree with the criticisms. It's "absolutely true" that Donato's paper can't say what will happen in these areas in the long-term, "but any ecologist reading that paper will recognize that," said David Foster, director of Harvard Forest at Harvard University, who was not involved with the letter to *Science*. "There's nothing misleading—the only thing that study had to go on was what's happened so far." Also, Foster said, other studies "have come to similar kinds of conclusions in other landscapes."

"The whole issue about what to do after forest fires burn is a complex one and one that's difficult to study," said James Agee, professor of forest ecology at the University of Washington in Seattle. Consequently, Forest researchers and managers tend to have "informed opinions" about what steps to take, he said, "but there's really not an awful lot of data." The Donato paper "did make a contribution," but *Science* was probably not the best place to publish the study, Agee said, since the journal's papers tend to be very short. "Whether by choice or not, they weren't able to provide the appropriate context for the study."

"If *Science* had known the context issues adequately, that paper would have been a lot less attractive," according to Robert Buckman, emeritus professor of forestry at

OSU. Buckman said he agrees with the technical content of the letter sent to Science, but disagrees with the attempt to delay publication of the paper.

Science editors have never considered delaying publication of an article after it has passed peer review and been accepted, Science editor-in-chief Donald Kennedy told *The Scientist* in an E-mail. Kennedy said that he can recall only one other case where someone has requested publication delay of another group's paper and that "it is an unusual way for senior faculty members to behave, especially with respect to a graduate student."

Editors at *Science* "encouraged us to submit a technical comment," Sessions said, which he and his colleagues are preparing now.

Donato declined to comment, except to say that he and his co-authors stand by their work and that "the paper makes no inference beyond the Biscuit fire."

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Links within this article

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PM_ID: 16400111

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Summary of the Biscuit complex fire, Oregon/California, The Wilderness Society
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