From: Paul Knapp
To: Herrmann, Betsy
Subject: Re: Saving Sage Grouse from the Trees: New Study Shows Benefits of Targeted Tree Removal to Declining Birds
Date: Wednesday, September 18, 2013 12:32:17 PM

Hi Betsy,

Great to hear from you! Thanks for the link to our juniper work and the photo from Nepal. Sounds like it was great trip.

I have fond memories of field work. Or maybe it was the Deschutes Brewery. I haven't worked on juniper since 2004 as we had pretty much tapped out ideas using the species and it wasn't too fun coring them (dusty, knuckle scraping, hot). So, I have moved on. I worked on a project on the Oregon coast for two summers coring Sitka spruce to reconstruct high wind events. That was a fun project and other than yellow jackets, posed few hazards. Mainly though, I've been working with ponderosa pine in Montana and Idaho. Pete and I have continued to do work together and hopefully will continue until retirement, which is no time soon.

Understand what you mean about budget cuts. We've been heavily affected here. Our state legislature has made severe cuts and we've had to eliminate positions. We had discussions earlier this semester about removing phones as another means to cut costs as there's nothing else left to remove. Also, because of the federal sequester, getting a grant has become extremely difficult. So, not great times in academia right now.

The Wall of Fame of former graduate students remains in my lab, with your photo prominently displayed. Hard to believe that you worked on your thesis over a decade ago. Time flies....

Thanks again for the email.

Cheers,

Paul

On Tue, Sep 17, 2013 at 5:28 PM, Herrmann, Betsy <betsy_herrmann@fws.gov> wrote:

> Hi Paul -
>
> Just came across a couple of your venerable publications from 1998 and 2001, referenced in the attached greater sage-grouse article. Great data! Sorry to say, juniper removal (that is, young "invasive" juniper) seems to be the "low-hanging fruit" for sage-grouse habitat restoration. I was pretty excited to see your work referenced in the sage-grouse literature. What is your tree of fancy these days? Are you into the more regal conifers now? Don't forget the little gnarly juniper. "Longevity through adversity," right?
>
> I've also been meaning to send you a picture from a Nepal - my husband and I went there last fall and we passed through an area with some type of nepalese juniper. I can't remember the species. If you look closely you can see a very tall peak in the background. We had a great trip, trekked for almost 3 weeks and got pretty high up (well above the junipers).
>
> Things here in UT are fine. Work in the FWS is OK, but our budget continues to go down down down and the office has gotten much quieter in the last year with low staff levels. Enjoying outdoor fun things in Utah as always (skiing, hiking, biking, etc.).
>
> Hope you are doing well!
>
> Betsy

Betsy Herrmann
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Achieving sustainable native species and ecosystems through leadership, partnerships, and innovation.

---------- Forwarded message ----------
From: **DElia, Jesse** <jesse_delia@fws.gov>
Date: Mon, Sep 16, 2013 at 12:22 PM
Subject: Fwd: Saving Sage Grouse from the Trees: New Study Shows Benefits of Targeted Tree Removal to Declining Birds
To: FW6 Sage-grouse Biologists <fw6_sage-grouse_biologists@fws.gov>, FW6 Sage-grouse FMT <fw6_sage-grouse_fmt@fws.gov>

FYI

---------- Forwarded message ----------
From: **Hollar, Kathy** <kathy_hollar@fws.gov>
Date: Mon, Sep 16, 2013 at 8:55 AM
Subject: Fwd: Saving Sage Grouse from the Trees: New Study Shows Benefits of Targeted Tree Removal to Declining Birds
To: Jesse DElia <Jesse_DElia@fws.gov>, Marilet Zablan <Marilet_Zablan@fws.gov>

Please help distribute to field. Thanks.

Kathy Hollar
503-231-6156 office
503-961-3993 cell

---------- Forwarded message ----------
From: **Maestas, Jeremy - NRCS, Redmond, OR** <Jeremy.Maestas@or.usda.gov>
Date: Mon, Sep 16, 2013 at 8:30 AM
Subject: Saving Sage Grouse from the Trees: New Study Shows Benefits of Targeted Tree Removal to Declining Birds
To:

Colleagues,

I'm pleased to share with you this new science quantifying the effects of conifer encroachment on sage-grouse and forecasting population-level outcomes of targeted conifer removal. This is part one of a long term outcome-based evaluation underway in Oregon examining grouse responses to investments in conifer removal. SGI's science-driven approach helps partners measure effectiveness of conservation practices and adjust delivery as needed to maximize bird benefits. Please help us distribute these findings to inform partner efforts rangewide.

Best regards,

Jeremy Maestas

FOR IMMEDIATE RELEASE

September 16, 2013

Contacts

Sage Grouse Initiative

Dr. David Naugle, Professor, University of Montana, and National Science Advisor, USDA-NRCS, Sage Grouse Initiative: david.naugle@umontana.edu, 406- 240-0113

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The Nature Conservancy

Dr. Jeff Evans, Senior Landscape Ecologist, The Nature Conservancy: Jeffrey_evans@tnc.org, 970-672-6766

Dr. Sharon Baruch-Mordo, Spatial Scientist, The Nature Conservancy: sbaruch-mordo@tnc.org, 970-484-9598 x7102

Saving Sage Grouse from the Trees: New Study Shows Benefits of Targeted Tree Removal to Declining Birds

Proactive conservation that removes encroaching trees helps maintain sage grouse populations within their remaining strongholds, according to a study published today in the scientific journal, Biological Conservation. In the absence of fire, juniper and other conifer tree species have greatly expanded their range into native sagebrush habitats where they don't belong, reducing shrubs and grasses that grouse rely on for their survival.

On the heels of a 2010 Endangered Species Act "candidate" designation, partners in the USDA Natural Resources Conservation Service's Sage Grouse Initiative (SGI) have accelerated removal of encroaching trees by ten-fold across western states like Oregon, Idaho, Nevada, Utah, Colorado, and California.

"Our key finding is that grouse populations are unable to make a living once encroaching trees occupy more than 4% of their habitat," said Dr. Sharon Baruch-Mordo, lead author and scientist with The Nature Conservancy. This new study validates SGI's strategy of targeting and removing trees early in the invasion process to prevent birds in jeopardy from being lost.

"Early tree removal is highly effective and less costly than a delay-and-repair approach that tries to turn a forest back into a sagebrush ecosystem again," said Dr. Dave Naugle, SGI's

National Science Advisor at the University of Montana. Naugle goes on to say this new study gives confidence to partners involved in watershed scale tree removal that their investment is achieving the desired conservation outcome.

The study closes with an estimate of $8.75 million annually to eliminate the tree encroachment threat in Oregon within the decade, an investment well within the scope of conservation already achieved. “In 3 short years, we developed both the biological and economic game plans required to match scale of the solution to that of the problem,” said Jeremy Maestas, SGI’s Oregon-based National Technical Lead. Maestas adds that grouse do not recognize boundaries, so the next frontier in ratcheting up conservation is to seamlessly deliver tree removal across private and public land ownerships in the West.

To learn more about tree removal and hear from our SGI partnership, view the short video.

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Research Article

Saving sage-grouse from the trees: A proactive solution to reducing a key threat to a candidate species. Sharon Baruch-Mordo, Jeffrey S. Evans, John P. Severson, David E. Naugle, Jeremy D. Maestas, Joseph M. Kiesecker, Michael J. Falkowski, Christian A. Hagen, Kerry P. Reese. Download here.

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