

MEETING NOTES (D. SHAW, SECRETARY)

**W2187 Interactions of emerging threats and bark beetle-microbial dynamics in forest ecosystems.
2012 Meeting Tuesday April 24**

Video based conference: Program Starts: 8:00 am west coast, 9:00 am mtn, 10:00 am and 11:00 am eastern time. 3+ hours.

Introductions: Bill Jacobi Chair. Participant introductions:

1. Barbara Benz- USDA FS UT
2. Fred Baker- UT
3. Bryce McPhearson and Dave Wood- CA
4. Enrico Bonello- Ohio
5. Ken Raffa- WI
6. Bill Jacobi-CO
7. Steve Cook- ID
8. Fred Stephen- AR
9. Dave Shaw- Oregon
10. Stella Coakley, W2187 Advisor, Oregon State U/Land Grant/Agriculture Experiment Stations
11. Sandy Sears, Assistant to the Associate Deans, Oregon State U (online functions)

Update from advisor: Stella Coakley

- This project is scheduled to run 2009-2014. Next year would be a good time to determine if we want to continue beyond 2014, begin to write up new project.
- We should make every attempt to include folks from all the land grant schools across the country into W2187. Participants will informally contact folks they think would be good.
- Eric Norland is our NIFA contact. NIFA is consolidating pest funding, so if anyone has comments for NIFA, now is the time to chime in.

Business Meeting:

- Next meeting will be prior to the Western Forest Insect Work Conference (March 4-8, 2013) on March 4, Monday.
- Dave Shaw is Secretary in 2012 and Chair in 2013
- **Steve Cook, Univ. of Idaho** will be the new Secretary for 2013, and Chair in 2014.
- 3 yr report due soon. D. Shaw will work with Bill J. Outcomes are part of the content. Western Region can help.
- Each participant should report everything from October 1-Sept 30, more or less, as our interactions with W2187 for our 3 and 5 year reports. Template for reporting annual is attached at the bottom of these meeting notes. Will contact folks again in August/Sept. as a reminder.

Notes from 2011 meeting

- Oct 2009 W-2187 was set up for 5 yr project
- Oct 2012 –we will need a 3 yr review
- Oct 2013- we will need a proposal for submission in January of 2014 to continue.
- Oct 1 of each year the annual report is due
- We need impact statements for each year and for the 3 yr review

This year it would be good to talk about media coverage of Mountain Pine Beetle and Eastern Ash Borer.

Research update by participants: 10 min presentations.

1. Barbara Benz- USDA FS UT

A major focus on temperature and bark beetle development/ecology. Key to understanding climate change.

2. Fred Baker- UT

Aspen decline is not occurring in Utah. Mitigating white pine blister rust in eastern white pine with pruning is being investigated. One can predict percent infection from plot DMR for 5 western host species. Lodgepole pine is not really hammered by *A. americanum*.

3. Brice McPherson and Dave Wood- CA

Investigations of SOD/Arthropods/Host interactions/ecology. Do fungi introduced by ambrosia and bark beetles accelerate mortality of coast live oaks infected by *Phytophthora ramorum*? Brice A. McPherson and David L. Wood, UC Berkeley
Pierluigi Bonello, Ohio State University, Nadir Erbilgin, University of Alberta
Mapping Sudden Oak Death in native forests: Progress towards informed management.
Brice A. McPherson, David L. Wood, Maggi Kelly, Greg Biging, UC Berkeley

4. Enrico Bonello- Ohio .

Introduced two graduate students who presented on current topics:
Patrick Sherwood. Effects of *Pinus nigra* phenolics on growth of *Diplodia pinea*.
Anna O. Conrad. Metabolite profiling to predict coast live oak resistance to *Phytophthora ramorum*.

5. Ken Raffa- WI

Provided an amazing list of current research on:

Ecosystem responses to root weevil - fungal - pine engraver interactions in red pine plantations.
Brian Aukema, Dave Coyle, Jane Cummings Carlson, Sally Dahir, Xia Lee, Bob Murphy, John Orrock, Susan Paskewitz, Jesse Pfammatter, Dan Young, Jun Zhu

Symbionts of bark beetles.

Aaron Adams, Brian Aukema, Joerg Bohlman, Celia Boone, Cameron Currie, Nadir Erbilgin
Richard Hofstetter, Jesse Pfammatter, Garrett Suen

Effects of fire on host susceptibility to and population dynamics of mountain pine beetle.
Barbara Bentz, Darren Blackford, Andy Lerch, Erinn Powell, Phil Townsend

Defense chemistry of whitebark pine.

Barbara Bentz, Celia Boone, Andy Lerch, Chris Pennings, Erinn Powell, Phil Townsend

6. Bill Jacobi-CO

Thousand Cankers Disease first described in Colorado, now investigating treatments.

Introduced Dan West, graduate student. Mountain Pine Beetle in the

Front Range: implications for lodgepole and ponderosa. Major implications regarding what the mountain pine beetle will do. And; Javier Mercado. Characterize the MPB's mite and fungal phoretic fauna along an altitudinal gradient in the CO Central Rockies

7. Steve Cook- ID

Emphasis areas 2011/2012. MPB-Fire Interactions. Hoffman, C.M., P. Morgan, W. Mell, R. Parsons, E. Strand & S.P. Cook. *In Press*. Numerical simulation of crown fire hazard immediately following bark beetle-caused mortality in lodgepole pine forests. *Forest Science*. Hoffman, C.M., P. Morgan, W. Mell, R. Parsons, E.K. Strand & S. Cook. *Accepted with Revision*. Surface fire intensity influences simulated crown fire behavior in forests with mountain pine beetle-caused tree mortality. *Forest Science*. Using Systemic Insecticides in Conifer Seed orchards. Cook, S.P., B.D. Sloniker and M. Rust. *Submitted*. Using systemically-applied insecticides for management of ponderosa pine cone beetle in pine seed orchards. *Western Journal of Applied Forestry*. Other 'Emerging' Issues – Adelgids in Idaho

8. Fred Stephen- AR

Major integrated research effort to figure out the causes and forest consequences of the red oak borer outbreak in Arkansas.

9. Dave Shaw- Oregon

Swiss needle cast in Douglas-fir of coastal Oregon. Larch casebearer parasitoid wasps. Pine butterfly. Mt.pine beetle and fire.

Template for each member to provide 2011-2012 report to the Secretary
CRIS Number: 0220701

Project: W2187, Interactions of emerging threats and bark beetle-microbial dynamics in forest ecosystems

Report period:

REPORT: OUTPUTS / ACCOMPLISHMENTS:

Objective 1: Characterize the role of biotic and abiotic factors in predisposing trees to bark beetle attack and subsequent mortality

Objective 2: Characterize the diversity and interactions among tree hosts, bark beetles, their natural enemies and associated fungi.

Objective 3: Integrate and apply the knowledge gained from objectives 1 and 2 to forest ecosystems as influenced by emerging issues such as invasive species, global climate change, changing land use patterns and multiple and conflicting societal demands

OUTCOMES / IMPACTS:

1. PUBLICATIONS:
2. Journal articles
3. Book Chapters, Technical Reports
4. GRADUATE DEGREES:
5. FUNDING