

Tuesday, Jan. 27 - Continental A

SECTION 1: Introduction (Moderator Ray Carruthers)

- 8:15 a.m. Welcome and Announcements
- 8:30 a.m. **Jim Tate** – Good Science/Good Policy for Biological Control
- 9:15 a.m. Workshop Problem Statement/Definition
 - **Carla D'Antonio** – Invasive Plants and Their Impact: An Overview
 - **Ray Carruthers** – Benefits and Risks of Biological Control: An Overview
- 10 a.m. **BREAK**
- 10:30 a.m. **Barbara Barratt** – Environmental Safety of Biological Control: Science and Policy in New Zealand
- 11:00 a.m. **Al Cofrancesco** – Regulations and Compliance Issues for APHIS-TAG, FWS Section 7, and NEPA
- 11:30 a.m. **Panel on State and Local Issues on Decision-Making for Biological Control** (including harmonization of state weed lists, assessment of strengths and weaknesses of current system, opinions on overall versus site-specific EAs, gaps in current system, etc.). Panelists: **Mike Pitcairn** (CDFA), **Tracy Horner** (APHIS), **Linda Drees** (NPS), **Eric Coombs** (ODA), **Debra Eberts** (BR), **Eric Lane** (CDA), and **M. Tracy Johnson** (USFS)

12:00 - 1:00 p.m. **LUNCH**

SECTION 2: Tools for Evaluating the Risks of Potential Biological Control (Moderator John Herr)

- 1:00 p.m. **Mark Wright** – Using Probabilistic Risk Assessment in Decision-Making for Biological Control
- 1:30 p.m. **Sharlene Sing** – Use of SADIE for Weed Risk Assessment and Evaluation of Weed Biological Control Efficacy
- 2:00 p.m. **Ernest Delfosse** – A Model for Analyzing Risk from Biological Control Agents

- 2:30 p.m. **Karen Jetter** – Economic Framework for Decision-Making in Biological Control
- 3:00 p.m. **Peter McEvoy/Dennis Isaacson** - Risks and Benefits of the Cinnabar Moth: A Case Study on Changing Scientific and Policy Perspectives on a Widely-Used Weed Biological Control Agent
- 3:30 **BREAKOUT**: *What is missing from these models? What are the data requirements? What works with them? How robust are they under different circumstances, etc.?*
- 5:00 p.m. **Report back**
- 5:30 p.m. **Adjourn for Evening Festivities**
- 6:00-9:00 p.m. **Evening Reception / Cash Bar**

Wednesday, Jan. 28 - Continental A

SECTION 3: Scientific Inputs into the Decision-Making Process (Moderator Linda Drees)

- 8:00 a.m. Announcements
- 8:10 a.m. **Raghavan Charudattan** – Ecological, Practical, and Political Inputs into Selection of Targets: What Makes a Good Biological Control Target?
- 8:30 a.m. **John Maron** – Selection of Appropriate Target Plants and Realistic Expectations for Biological Control Agent Impacts
- 8:50 a.m. **Jack DeLoach** – Traditional Selection of Natural Enemies in Classical Biological Control: How it Works, Including Strengths and Weaknesses
- 9:10 a.m. **David Briese** – Translating Host-Specificity Studies into the Real World: The Need to Harmonize the Yin and Yang of Current Procedures
- 9:30 a.m. **Bernd Blossey** – Improving Assessment and Prediction of Target Impacts: Design and Insights from Studies at Home and Abroad
- 9:50 a.m. **Robert Nowierski** – The Value of Retrospective Studies and Predictive Models in Improving Impact and Control by Biological Control Agents
- 10:10 a.m. **Julie Denslow** – Predicting Community and Ecosystem Response to Reduction of Target Weeds: A Retrospective Analysis
- 10:30 a.m. **John Hoffmann** – Level of Target Control Needed to Produce a Benefit

- 11:00 a.m. **Andy Sheppard** – An Overview of Risk-Benefit Analysis in Biological Control
- 11:30 a.m. **BREAKOUT** *Do we have adequate biological knowledge to accurately preselect natural enemies for effectiveness? Can we predict host specificity and thus safety from traditional methods of testing? What new methods would improve our ability to make such determination, etc.?*
- 12:30 p.m. – **Report back**

• 1:00-2:00 p.m. **LUNCH**

SECTION 3: Scientific Inputs into the Decision-Making Process, continued (Moderator George Roderick)

- 2:00 p.m. **Svata Louda** – Improving Assessment and Prediction of Nontarget Impacts: The Value of Retrospective Studies
- 2:20 p.m. **Peter McEvoy/Eric Coombs** – The Transition from Retrospective to Prospective Studies in Biological Control of Weeds
- 2:40 p.m. **Ruth Hufbauer** – Uncertainties and Protocols Related to Evolution in Biocontrol Systems
- 3:00 p.m. **Alec McClay** – Selection of Biocontrol Agents – Gathering and Weighing the Evidence
- 3:20 p.m. **Roger Sheley** – Revegetation: Planning the End Game Before We Start
- 3:40 p.m. **BREAKOUT** *Are there experiments we could do in advance to better predict nontarget impacts? What tools should be developed for being better able to detect nontarget effects in nature? If it's not predictable, should we not make releases or release anyway?*
- 4:30 p.m. **Report back**
- 5:00 p.m. **Adjourn**
- 5:00-7:00 p.m. **DINNER (on your own)**

SECTION 3: Scientific Inputs into the Decision-Making Process, continued (Moderator Julie Gould)

- 7:00 p.m. **John Hoffmann** – Interaction of Agents: Insect with Insects
- 7:20 p.m. **Tony Caesar** – Interaction of Agents: Insects with Pathogens
- 7:40 p.m. **Jane Memmott** – Can We Predict Food Web Responses During Releases of Biological Control Agents?
- 8:00 p.m. **Dean Pearson** and **Ragan Callaway** – Assessing and Evaluating Indirect Community Effects Associated with Biological Control
- 8:20 p.m. **Tom Dudley/Robert Pattison** – Single Species Versus Multiple Species Management
- 8:40 p.m. Panelists to Question Speakers and Raise Major Issues for Discussion (**Peter Stiling, Dale Woods, Rosemarie DeClerck-Floate, Roger Sheley, Jack DeLoach**)
- 9:30 p.m. **Adjourn**

Thursday, Jan. 29 – Continental A

SECTION 4: Incorporating Biological Control into Management Programs (Moderator Carla D'Antonio)

- 8:00 a.m. **Announcements**
- 8:10 a.m. **Rod Lym** – Integrating Biological Control with Other Weed Management Technologies: How Can it Best be Done?
- 8:30 a.m. **Russell Messing** – Conflict Between Biological Control Agents: Can We Avoid Problems Before they Occur in Actual Management Systems?
- 8:50 a.m. **Mark Anderson** – Risk Analysis and Management Decisions for Biological Control Agents.
- 9:10 a.m. **Joe Balciunas/Eric Coombs** – Codes of Best Practices: Current and Future
- 9:30 a.m. **Sara Simonson** – A Plan to Detect and Prevent the Spread of *Cactoblastis cactorum* in North America.

- 9:50 a.m. **George Roderick** – Genes in Novel Environments: Genetics and Evolution in Biological Control
- 10:10 a.m. **Eric Coombs** – Statewide Monitoring: An Example for Every State to Follow
- 10:30 a.m. **BREAKOUT** (*Questions?*)
- 12:00 noon **Report back**

- 12:30 p.m. -1:30 p.m. **LUNCH**

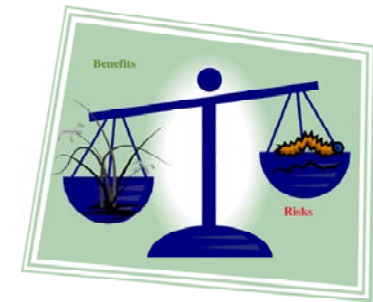
SECTION 5: Putting Science into the Regulatory Process (Moderator Allen Bullard)

- 1:30 p.m. **Andy Sheppard** – Effective Tools for Evaluating the Risks of Potential Biological Control Agents to Nontarget Organisms and How to Link Them to Improved Regulations
- 1:50 p.m. **Marc Miller** and **Greg Aplet** – The Regulatory Process: Is a Biological Control Law the Answer?
- 2:10 p.m. **Robert Flanders** – Changes in Plant Pest Act, the Current Regulatory Process, Response to New Ideas, and Possibilities for Adaptation
- 2:30 p.m. **Rick Sayers** – Section 7 Compliance: Are There Changes Ahead for Biological Control and What Does This Mean for Endangered Species?
- 2:50 p.m. **Tracy Horner** – Improving the Utility of the TAG Review for NEPA Assessments: A Collaborative Effort of Scientists and Regulators
- 3:10 p.m. **John Randall/Tunyalee Martin** – Improving Information Flow and Decision-Making Process for Local or Regional Managers Using Biological Control Technologies
- 3:30 p.m. **Closing Discussion and the Need for Action Teams** (Moderator Ray Carruthers) - Potential groups: legal and regulatory reform, code of best practices, scientific inputs into the decision-making process, decision tools, funding, education, etc.
- 4:30 p.m. **Ernest Delfosse** – Pulling it All Together: An Overview of Group Results and Future Directions
- 5:00 p.m. **Adjourn**

Online registration is available at www2.montana.edu/confservices/invasive_plant

Science and Decision-Making in Biological Control of Weeds

A Conference on the Benefits and Risks of Biological Control



January 27-29, 2004
Westin Hotel Tabor Center in
Downtown Denver, Colorado

*Registration 6 to 9 p.m. Monday, Jan. 26
and each morning beginning at 7 a.m.
Teller Room*

**A working conference supported by
the U.S. Department of Agriculture
and hosted by the Agricultural Research Service,
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conjunction with USDA-CSREES-IFAFS and the
Center for Invasive Plant Management**