**WSWS ANNUAL MEETING SYMPOSIUM PROPOSAL**

**Deadline for submission is June 15, 2012**

Date Submitted: **June 12, 2012**

Proposed Year of Symposium: **2013**

Title: **Biology and Management of Invasive Toadflax** **in the Western U.S.**

Organizers: **Sarah Ward (Colorado State University) and Sharlene Sing (U.S. Forest Service)**

Contact Person: **Sarah Ward**

Phone: **(970) 491-2102** Email**: sarah.ward@colostate.edu**

Justification and Objectives (no more than 300 words):

 **Non-native yellow toadflax (*Linaria vulgaris* Mill.) and Dalmatian**

**toadflax, (*Linaria dalmatica* (L.) are listed as noxious weeds throughout the western U.S. where invasive toadflax populations are widespread on public lands managed for timber,livestock grazing, recreation and wildlife habitat.**

**Although hundreds of thousands of dollars are spent annually on managing toadflax, invasion remainsdifficult to control and is especially problematic after fire.**

 **This timely symposium will reflect current multifaceted approaches to toadflax invasion by bringing together speakers active in different areas of research: chemical management (Beck), invasion ecology (Rew),**

**biocontrol (Sing) and genetics (Ward). The focus of the symposium will be integrating improved understanding of diverse aspects of toadflax biology to create more effective management strategies.**

 **Our intent is to appeal to a broad audience: toadflax invasion is of**

**Interest not only to those working with it as managers or researchers, but also as a model system exemplifying the need to integrate various disciplines to understand and manage an evolving invasion of especial importance in the western U.S. The objectives of the symposium are to showcase the diversity of current toadflax research, and to promote discussion on how recent research findings can be integrated and used to improve toadflax management.**

Target Audience: **Forest/range weed managers, plant invasion biologists, biocontrol specialists**

Associated WSWS Project(s): **Project 1: Weeds of Range and Natural Areas, and Project 5: Basic Biology and Ecology**

Length of Proposed Symposium: **3 hours**

Proposed Titles and Speakers (tentative agenda):

***Variable response of yellow toadflax to herbicides.* K. George Beck, Colorado State University (confirmed).**

***Invasiveness of Dalmatian toadflax along an elevation gradient*. Lisa Rew, Montana State University (confirmed).**

***New developments in biocontrol for yellow and Dalmatian toadflax.* Sharlene Sing, US Forest Service (confirmed).**

***Hybridization between yellow and Dalmatian toadflax: cause for concern?* Sarah Ward, Colorado State University (confirmed).**

***How can improved understanding of toadflax biology lead to better management*? Panel and audience discussion (Beck, Rew, Sing, Ward)**

Tentative Budget:

**Funds are requested to cover travel and lodging for the two proposed speakers who are not WSWS members. Beck and Ward are WSWS members and will cover their own expenses.**

**Sharlene Sing:**

**Return airfare from Bozeman, MT to San Diego: $614**

**Two nights lodging at the Catamaran Resort: $331 (inc.12.5% tax)**

 **$945**

**Lisa Rew:**

**Return airfare from Bozeman, MT to San Diego: $614**

**Two nights lodging at the Catamaran Resort: $331 (inc.12.5% tax)**

 **$945**

**Total requested: $1,890**