# **CURRICULUM VITAE**

# University of Idaho

NAME: Schwarzländer, Mark

DATE: 21 December 2023

**RANK OR TITLE:** Professor of Entomology, Biological Control of Weeds

Associate Director, Center for Research on Invasive Species (CRIS)

**DEPARTMENT:** Entomology, Plant Pathology and Nematology

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DATE OF FIRST EMPLOYMENT AT UI: September 28, 2000

**DATE OF TENURE:** July, 2007

DATE OF PRESENT RANK OR TITLE: July, 2014

## **EDUCATION BEYOND HIGH SCHOOL:**

# **Degrees:**

Ph.D. (Doktor der Naturwissenschaften, Dr. rer. nat.) Biology, Christian-Albrechts-University, Kiel, Germany, 1999, Major in Zoology and Ecology, Minor in Botany.

M.S. (Diplom Biologe) in Biology, Christian-Albrechts-University, Kiel, Germany, 1993, Major in Zoology, Minor in Botany.

## **EXPERIENCE:**

# Teaching, Extension and Research Appointments:

- 1997-2000, CABI Bioscience Centre Switzerland, Research Scientist: Manage project work on biological control of houndstongue (*Cynoglossum officinale*) and common reed (*Phragmites australis*); Develop collaborative studies comparing the ecology of the plants and candidate biocontrol agents in their native and introduced ranges; Administrate and service the information technology systems.
- 1993-97, International Institute of Biological Control, Switzerland: Ph.D. student investigating the impact of host-specific insect herbivory on plant and plant population traits of houndstongue, the biology and ecology of below-ground herbivores associated with houndstongue, and improvement of current host-range testing methodologies of candidate biocontrol agents.
- 1991-93, International Institute of Biological Control, Switzerland: M.S. (Diploma) student investigating the bionomics and ecology of three sympatric weevil species considered as candidate biocontrol agents for houndstongue.
- 1990 (September), International Institute of Biological Control, Switzerland: Research Assistant compiling data for a database on insect herbivores and their host plant records; Assisting with collections of biological control agents for shipment to North America.
- 1990 (April-August), Department of Ecology, Christian-Albrechts-University, Kiel, Germany: Teaching Assistant for a graduate level course in insect identification and taxonomy; Maintenance of the teaching collection for the department.
- 1989 (May-October), International Institute of Biological Control, Switzerland: Research Assistant assessing host range and evaluating biocontrol potential of weevil and leaf beetle species associated with *Cynoglossum officinale* and *Centaurea stoebi*, conducting life history studies with two biocontrol candidate species, a leaf-mining fly and a root gall-forming weevil.
- 1988 (April-July), Department of Ecology, Christian-Albrechts-University, Kiel, Germany: Research Assistant conducting studies on the ecology of *Platycampus luridiventris*, a saw fly species feeding on common alder, studying its natural enemy complex, rearing parasitic ichneumonid and braconid wasps, and carrying out studies on its consumption efficacy.

# **TEACHING ACCOMPLISHMENTS:**

# **Areas of Specialization:**

Biologically based management of invasive exotic plant species using arthropods and pathogens. Plant invasion mechanisms and invasive plant ecology. Integrated management of invasive plant species combining classical biological control and inter-specific plant competition.

# **Courses Taught:**

ENT 499, Directed Study: "Special Techniques in Biological Control of Weeds – Rearing *Bradyrrhoa gilveolella* to Control Rush Skeletonweed", 2 credits, 4 contact hours per week, Fall 2004.

ENT 499, Directed Study: "Special Techniques in Biological Control of Weeds – Interspecific Competition by Native and Exotic Grasses on Hoary Cress Performance", 2 credits, 4 contact hours per week, Fall 2004.

ENVS 500, Masters Student Research and Thesis Training: Summer – Fall 2007, Spring 2008, Spring – Summer 2009, Fall 2010 - Spring 2012.

ENT 500, Masters Student Research and Thesis Training: Fall 2001 – Spring 2006, Spring 2007 – Summer 2009, Fall 2010 – Spring 2023.

ENT 501.01, Entomology Seminar: 1 credit, 1 contact hour per week, Spring 2005, Spring 2008, Fall 2012.

ENT 501.02, Entomology Seminar: 1 credit, 1 contact hour per week, Spring 2005, Spring 2008, Fall 2012.

ENT 502, Directed Study: "Environmental Safety of Weed Biocontrol Agents", 1 credit, personal supervision of students, Fall 2001, Fall 2012.

PLSc 502, Directed Study: "Topics in Biological Control of Weeds", 1 credit, 1 contact hour per week, taught in collaboration with Dr. Tim Prather, Spring 2001.

ENT 502, Directed Study, "Training Graduate Students for the 2000 ESA Great Debate on InvasiveSpecies," 3 contact hours per week, taught together with Nilsa Bosque-Perez, Fall 2000.

ENT 502, Directed Study: "Entomology Student Great Debate", Fall 2012.

ENT 502, Directed Study: "Technical Writing", Fall 2012.

ENT 504, "Diversification of Entomological Knowledge", 1 credit, 1 contact hour, Fall 2012

ENT 504, "Extension and Outreach in Entomology", 1 credit, 2 contact hours, Fall 2014

ENVS 504, Biological Control, Taught in collaboration with Dr. James Johnson; 2 credits, 2 contact hours, Fall 2009.

ENT 500/600, M.S./Ph.D. Student Research and Thesis Training: Fall 2002 – Fall 2023; Spring 2007 – Spring 2023.

NO COURSE NUMBER; Reading and Discussion Club: Readings in Invasion Ecology, 1 contact hour per week, Spring 2007.

### **Students Advised:**

Graduate Students Currently Advised - Major Professor:

Jessica Fung, Ph.D. (started Summer 2016)

Anjila Thapa, **Ph.D.** (started Summer 2019)

Karuna Nepal, Ph.D. (started Fall 2020)

Julia Rushton, Ph.D. (started 1 June 2022)

Sudikshya Devkota, M.S. (started 1 June 2022)

Audrey Lloyd M.S. (started Summer 2023)

Anupa Adhikari **Ph.D.** (currently recruited for Fall 2024)

Graduate Students Advised to Completion of Degree - Major Professor:

Samikshya Aryal, M.S. (graduated Summer 2023)

Sujan Panta, M.S. (graduated April 2022)

Bijay Subedi, M.S. (graduated Summer 2021)

Karuna Nepal, M.S. (graduated Summer 2019)

Jessica Rendon, Ph.D. (graduated February 2019)

Ikju Park, **Ph.D.** (graduated Summer 2017)

Robert Gibson, M.S. (graduated Spring 2017)

Basu Kafle, M.S. (graduated Spring 2016)

Joel Price, M.S. (graduated Spring 2014)

Marianna Szucs, Ph.D. (graduated Fall 2010)

Lorena Brown, M.S. (graduated Fall 2008)

Mark Cole, M.S. (graduated Fall 2008)

Rachel Winston, M.S. (graduated Spring 2007)

Ken Pulifiaco **Ph.D.** (graduated Summer 2008)

Maria Alejandra Barahona Ferman M.S. (graduated Spring 2006)

Joseph Milan, M.S. (graduated Fall 2005)

Michael Cripps, M.S. (graduated Spring 2005)

Jessica McKenney, M.S. (graduated Spring 2005)

Jennifer Andreas, M.S. (graduated Fall 2004)

### Graduate Students Committees:

1 M.S., Agricultural Economy, University of Idaho

1 Ph.D., Biology, University of Idaho

1 Ph.D., Plant Sciences, University of Idaho

1 Ph.D., Entomology, University of Idaho

1 M.S., Plant Sciences, University of Idaho

1 Ph.D., Entomology, Cornell University

1 M.S., Entomology, Washington State University

1 Ph.D., Public Policy, Boise State University

Undergraduate Advisees on Senior Research Projects with Postdoctoral Fellow Dr. Aaron Weed: Jess Inskeep

Awards: 2012 National Meeting of the Entomological Society of America, Knoxville, TN. President's Prize competition. 1st Place – Display Presentation Plant – Insect Ecosystems – Undergraduate; Pacific Branch - Entomological Society of America, Portland, OR. 1st Place – Display Presentation. Student Competition – Undergraduate; University of Idaho, 2012 Innovation Showcase. 2nd Place - Display Presentation. Student Competition – Undergraduate; Environmental Science Senior Seminar Class 2012. 3rd Place. Display Presentation.

## Tessa Scott

Awards: Pacific Branch - Entomological Society of America, Portland, OR. 2nd Place – Display Presentation. Student Competition – Undergraduate; Environmental Science Senior Seminar Class 2012. 2rd Place. Display Presentation.

## **Theses Completed:**

- Aryal, S. 2023. Abundance and distribution of two unevenly managed root-mining insects for the biological control of spotted knapweed in Idaho. M.S. Thesis. University of Idaho 162pp
- Sujan, P. 2022. The role of specialized soil types, agent and plant traits on the performance of biological weed control candidate species. M.S. Thesis. University of Idaho 136 pp.
- Subedi, B. 2021. The role of olfactory and visual cues in the host selection behavior of biocontrol candidate specialist herbivores for the biological control of an invasive plant. M.S. Thesis. University of Idaho 123 pp.
- Nepal, K. 2019. The role of olfactory cues in the host selection behavior of a specialist weevil used for the biological control of an invasive plant. M.S. Thesis. University of Idaho 156 pp.
- Rendon, J. 2019. Investigating the host selection Behavior of *Ceutorhynchus cardariae*, a potential biological control agent for *Lepidium draba*. Ph.D. Thesis. University of Idaho 202 pp.
- Park, I. 2017. The role of olfactory and visual cues in the host finding behavior of a near monophagous specialist insect herbivore considered for biological control of weeds. Ph.D. Thesis. University of Idaho, Moscow, Idaho. 146 pp.
- Gibson, R. 2017. Biology and interaction of the invasive forb *Isatis tinctoria*, dyer's woad, with the native rust fungus *Puccinia thlaspeos* in populations in the Intermountain West, United States. M.S. Thesis. University of Idaho, Moscow, Idaho. 90 pp.
- Kafle, B. 2016. Olfaction mediated host selection in a specialist weevil used for biological control of an

- invasive plant. M.S. Thesis. University of Idaho, Moscow, Idaho. 151 pp.
- Price, J. 2014. Post-release assessment of classical biological control of Canada thistle (*Cirsium arvense*) in the western United States. M.S. Thesis. University of Idaho, Moscow, Idaho. 121 pp.
- Szűcs, M. 2010. Landscape genetics, hybridization and rapid evolution in the biological control agent *Longitarsus jacobaeae*. Ph.D. Thesis. University of Idaho, Moscow, Idaho. 104 pp.
- Brown, L.S. 2008. Genetic variation of the invasive *Linaria dalmatica* in its introduced range in Western North America and the impact of its predominant Biological Control Agent, *Mecinus janthinus*. Master's Thesis. University of Idaho, Moscow, Idaho. 89 pp.
- Cole, M.E. 2008. Studies on the host-specificity of a potential biocontrol agent *Mogulones borraginis* (F.) and the bio-geographical variation of plant defense induction in the rangeland weed *Cynoglossum officinale* L. Master's thesis. University of Idaho, Moscow, Idaho. 94 pp.
- Puliafico, K.P. 2008. Influence of insect herbivory, plant competition and plant defense on the invasion success of hoary cress (*Lepidium draba* L. (Brassicaceae)). Ph.D. Thesis. University of Idaho, Moscow, Idaho. 225 pp.
- Winston, R.L. 2007. The Suite of Seed-Feeding Biological Control Insects for Yellow Starthuistle: Champions or Merely Team Players? Master's Thesis. University of Idaho. Moscow, Idaho. 102 pp.
- Barahona Ferman, M.A. 2006. Impact of the stem-mining weevil *Mecinus janthinus* on the invasive *Linaria dalmatica*. Master's Thesis. University of Idaho. Moscow, Idaho. 84 pp.
- Cripps, M.G. 2005. Enemy release and the evolution of increased competitive ability as potential invasion mechanism of *Lepidium draba* L. in the western United States. Master's Thesis. University of Idaho. Moscow, Idaho. 94 pp. H.C. Manis Award for Excellence in Entomological Research.
- McKenney, J.L. 2005. An inter-continental comparison of vigor and herbivory for the invasive plant *Lepidium draba*. Master's Thesis. University of Idaho. Moscow, Idaho. 62 pp.
- Milan, J. 2005. Control efficacy of the biological control agents *Eriophyes chondrillae* and *Puccinia chondrillina* on rush skeletonweed, *Chondrilla juncea* L. Master's Thesis. University of Idaho. Moscow, Idaho. 97 pp.
- Andreas, J.E. 2004. Non-target effects of *Mogulones cruciger* Herbst (Coleoptera: Curculionidae), a biocontrol agent released to control houndstongue in Canada. Master's Thesis. University of Idaho. Moscow, Idaho. 154 pp. H.C. Manis Award for Excellence in Entomological Research.

# **Materials Developed:**

### Petitions for release of biological control agents in North America:

- Schwarzländer, M., Weyl, P., Hinz, H.L. and Winston R.L. 2021. A petition for the introduction and open-field release of the seed-feeding weevil *Ceutorhynchus peyerimhoffi* Hustache (Coleoptera: Curculionidae) for the biological control of dyer's woad (*Isatis tinctoria* L.) in the United States. Federal Official Research Report submitted to USDA APHIS PPQ. 92 pages.
- Schwarzländer, M., Stutz, S., Hinz, H.L. and Winston R.L. 2021. A petition for the introduction and open-field release of the root-mining weevil *Mogulones crucifer* Pallas (Coleoptera: Curculionidae) for the biological control of houndstongue (*Cynoglossum officinale* L.) in the United States. Federal Official Research Report submitted to USDA APHIS PPQ. 86 pages.
- Schwarzländer, M., Hinz, H.L. and Winston R.L. 2020. A petition for the introduction and open-field release of the seed-feeding weevil *Mogulones borraginis* (Fabricius) (Coleoptera: Curculionidae) for the biological control of houndstongue (*Cynoglossum officinale* L.) in the United States. Federal Official Research Report submitted to USDA APHIS PPQ. 80 pages.
- Schwarzländer, M., Weyl, P., Hinz, H.L., Winston, R.L., and Weyl, P. 2020. A petition for the introduction, and open-field release of the gall-forming weevil *Ceutorhynchus cardariae* (Coleoptera: Curculionidae) for the biological control of hoary cress species (*Lepidium draba*, *Lepidium chalepense* and *L. appelianum*) in North America. Official Research report submitted to USDA APHIS PPQ. 72 pages.

Schwarzländer, M., Hinz, H.L. and Winston, R.L. 2011. A petition for the introduction, experimental release and open-field release of the root-mining weevil *Ceutorhynchus cardariae* (Coleoptera: Curculionidae) for the biological control of hoary cress (*Lepidium draba* and *L. appelianum*) in North America. Official Research Report submitted to USDA APHIS PPQ. 98 pages.

### Websites:

http://www.cals.uidaho.edu/epic/ Research laboratory website.

http://www.cals.uidaho.edu/hawkweed/ Hawkweed biological control consortium website.

http://web.cals.uidaho.edu/crissp/ Center for Research on Invasive Species and Small Populations website.

http://www.cals.uidaho.edu/hoarycress/ Hoary cress biological control consortium website.

## Research Blog:

http://www.weedbug.blogspot.com/ Weedbug biocontrol research blog for our lab activities.

## Google Scholar Profile:

http://scholar.google.com/citations?user=sTyFsa0AAAAJ&hl=en&oi=ao

# Refereed Extension Publications:

Rashed, A., Leblanc, L., Looney, C., Schwarzländer, M. Cook, S. 2020. No Such Thing as a "Murder Hornet:" Asian Giant Hornet, an Invasive Species to Monitor. University of Idaho Extension Bulletin 988.

### Books, Field Guides and Manuals:

- Schwarzländer, M. and J.H. Gaskin, Eds. 2016. Proceedings of the 3<sup>rd</sup> Northern Rockies Invasive Plants Council Conference February 10-13, 2014. Airway Heights, WA. USDA Forest Service, Forest Health Technology Enterprise Team, Morgantown, West Virginia. FHTET-2016-03. 189 pp.
- Andreas, J.E., Coombs, E.M., Piper, G.L., Milan, J.D. and Schwarzländer, M. 2002-2016 (updated annually). Biological Control. pp 5-13. In: 'Pacific Northwest 2012 Weed Management Handbook', Oregon State University Publishing, Corvallis, OR. <a href="http://pnwpest.org/pnw/weeds">http://pnwpest.org/pnw/weeds</a>.
- Blossey, B., Randall, C.B., and Schwarzländer, M. 2016. Biology and Biological Control of Purple Loosestrife. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV. 101 pages.
- Winston, R.L., DesCamp, W., Andreas, J.E., Randall, C.B., Milan, J. and Schwarzländer, M. 2014. New Invaders of the Northwest. Field Guide, USDA Forest Service FHTET. Morgantown, WV. 113 pages.
- Winston, R.L., DesCamp, W., Andreas, J.E., Randall, C.B., Milan, J. and Schwarzländer, M. 2014. New Invaders of the Southwest. Field Guide, USDA Forest Service FHTET. Morgantown, WV. 107 pages.
- Winston, R.L., Schwarzländer, M., Randall, C.B. and Reardon, R. 2011. Biology and Biological Control of Knapweeds. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2011-05 (2<sup>nd</sup> Ed.): 139 pages.
- Winston, R.L., Randall, C.B., Littlefield, J.L., Schwarzländer, M., Birdsall, J. and Coombs, E.M. 2011. Biology and Biological Control of Tansy Ragwort. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2011-02: 122 pages.
- Winston, R.L., Schwarzlander, M., Randall, C.B. and Reardon, R. 2010. Biology and Biological Control of Common St. Johnswort. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2010-05 (2<sup>nd</sup> Ed.): 96 pages.
- Winston, R.L. and Schwarzländer, M. 2010. Roadside Revegetation: Utilizing Native Species in the Western United States. USDA Forest Service Health Technology Enterprise Team (FHTET),

- Morgantown, WV, and University of Idaho Extension. FHTET-2010-04 (2<sup>nd</sup> Ed.): 117 pages.
- Winston, R.L. and Schwarzländer, M. 2009. New Invaders of the Northwestern United States. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2009-04: 126 pages.
- Winston, R.L., Schwarzländer, M., Gaskin, J.F. and Crabtree, C. (editors). 2009. Rush Skeletonweed (Chondrilla juncea) Management Plan for the Western United States. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2009-03: 117 pages.
- Winston, R.L., Hansen, R.W., Schwarzlander, M., Coombs, E.M., Randall, C.B. and Lym, R. 2007. Biology and Biological Control of Exotic True Thistles. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2007-05 (3<sup>rd</sup> Ed.): 157 pages.
- Bourchier, R., Hansen, R.W., Lym, R., Norton, A., Olson, D., Randal, C.B., Schwarzländer, M. and Skinner, L. 2005. Biology and Biological Control of Leafy Spurge. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2005-07 (2<sup>nd</sup> Ed.): 125 pages.
- Wilson, L.M., Schwarzländer, M., Blossey, B. and Bell Randall, C.B. 2004. Biology and Biological Control of Purple Loosestrife. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2004-12: 78 pages.

#### Laminated Pocket Field Guides:

- Schwarzländer, M., Winston, R.L. and Harmon, B.L. 2012. Noxious Weeds and their Biocontrol Agents: Knapweeds. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2011-08: 49 pages.
- Schwarzländer, M., Winston, R.L. and Harmon, B.L. 2012. Noxious Weeds and their Biocontrol Agents: Purple Loosestrife. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2012-06: 25 pages.
- Schwarzländer, M., Winston, R.L. and Harmon, B.L. 2012. Noxious Weeds and their Biocontrol Agents: Leafy Spurge. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2006-05: 41 pages.
- Schwarzländer, M., Winston, R.L. and Harmon, B.L. 2012. Noxious Weeds and their Biocontrol Agents: Rush Skeletonweed. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2012-06: 25 pages.
- Schwarzländer, M., Winston, R.L. and Harmon, B.L. 2012. Noxious Weeds and their Biocontrol Agents: Yellow Starthistle. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2012-06: 31 pages.
- Winston, R.L. and Schwarzländer, M. 2012. Noxious Weeds and their Biocontrol Agents: Thistles. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2007-11, Reprint 2011: 58 pages.
- Winston, R.L. and Schwarzländer, M. 2012. Noxious Weeds and their Biocontrol Agents: Bindweeds. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. 265 pages.
- Schwarzländer, M., Winston, R.L. and Harmon, B.L. 2011. Noxious Weeds and their Biocontrol Agents: Toadflax. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2011-08: 36 pages.
- Winston, R.L. and Schwarzländer, M. 2011. Noxious Weeds and their Biocontrol Agents: *Cirsium* thistles. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2007-01: 50 pages.

- Winston, R.L. and Schwarzländer, M. 2008. Noxious Weeds and their Biocontrol Agents: Broom and Gorse. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. 50 pages.
- Winston, R.L. and Schwarzländer, M. 2008. Noxious Weeds and their Biocontrol Agents: St. Johnswort. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. 26 pages.
- Winston, R.L., Szűcs, M. and Schwarzländer, Mark. 2008. Noxious Weeds and their Biocontrol Agents: Tansy Ragwort. USDA Forest Service Health Technology Enterprise Team (FHTET), Morgantown, WV, and University of Idaho Extension. FHTET-2006-05: 24 pages.

# **Educational Videos:**

- Winston, R., **Schwarzländer, M**. and T. and McMahon, T. 2023. Bull thistle (*Cirsium vulgare*, Asteraceae, Terrestrial). Weed Identification Series [Video, 3:25 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer**, **M**. and T. and McMahon, T. 2023. Downy brome (*Bromus tectorum* = *Anisantha tectorum*, Poaceae, Terrestrial). Weed Identification Series [Video, 3:38 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**. and T. and McMahon, T. 2023. Medusahead (*Taeniatherum caputmedusae*, Poaceae, Terrestrial). Weed Identification Series [Video, 3:56 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M**. and T. and McMahon, T. 2023. Parrotfeather milfoil (*Myriophyllum aquaticum*, Haloragaceae, Aquatic). Weed Identification Series [Video, 3:08 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M**. and T. and McMahon, T. 2023. Russian olive (*Elaeagnus angustifolia*, Elaeagnaceae, Terrestrial). Weed Identification Series [Video, 3:17 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M**. and T. and McMahon, T. 2023. Ventenata (*Ventenata dubia*, Poaceae, Terrestrial). Weed Identification Series [Video, 3:25 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M.**, and McMahon, T. 2022. 1. Classical weed biological control: a history and explanation. Weed Biological Control Series. [Video, 6:25 playtime]. Retrieved from 1. Classical weed biological control: a history and explanation YouTube
- Winston, R., **Schwarzländer**, **M**., and McMahon, T. 2022. 2. Is classical biological control of weeds appropriate for your infestation? Weed Biological Control Series. [Video, 4:10 playtime]. Retrieved from
  - 2. Is classical weed biological control appropriate for your weed infestation? YouTube
- Winston, R., **Schwarzländer**, **M.**, and McMahon, T. 2022. 3. Choosing the best release site. Weed Biological Control Series. [Video, 5:10 playtime]. Retrieved from 3. Choosing the best weed biocontrol release sites YouTube
- Winston, R., **Schwarzländer**, **M.**, and McMahon, T. 2022. 4. Identifying appropriate biological control agents. Weed Biological Control Series. [Video, 2:42 playtime]. Retrieved from 4. Identifying appropriate weed biocontrol agents YouTube

- Winston, R., **Schwarzländer**, **M**., and McMahon, T. 2022. 5. Obtaining weed biological control agents. Weed Biological Control Series. [Video, 5:15 playtime]. Retrieved from 5. Obtaining weed biocontrol agents YouTube
- Winston, R., **Schwarzländer, M.**, and McMahon, T. 2022. 6. Field collecting biocontrol agents. Weed Biological Control Series. [Video, 6:15 playtime]. Retrieved from 6. Field collection of weed biocontrol agents YouTube
- Winston, R., **Schwarzländer**, **M**., and McMahon, T. 2022. 7. Sorting weed biocontrol agents. Weed Biological Control Series. [Video, 5:01 playtime]. Retrieved from 7. Storing weed biocontrol agents YouTube
- Winston, R., **Schwarzländer, M**., and McMahon, T. 2022. 8. Transporting biocontrol agents. Weed Biological Control Series. [Video, 3:51 playtime]. Retrieved from 8. Transporting weed biocontrol agents YouTube
- Winston, R., **Schwarzländer, M.**, and McMahon, T. 2022. 9. Releasing biocontrol agents, part 1. Weed Biological Control Series. [Video, 4:36 playtime]. Retrieved from 9. Releasing weed biocontrol agents (Part 1: Release preparation) YouTube
- Winston, R., **Schwarzländer, M.**, and McMahon, T. 2022. 10. Releasing biocontrol agents, part 2. Weed Biological Control Series. [Video, 5:18 playtime]. Retrieved from 10. Releasing weed biocontrol agents (Part 2: Handling biocontrol agents) YouTube
- Winston, R., **Schwarzländer, M**., and McMahon, T. 2022. 11. Monitoring release sites. Weed Biological Control Series. [Video, 7:24 playtime]. Retrieved from 11. Monitoring weed biocontrol release sites YouTube
- Winston, R., **Schwarzländer, M**., and McMahon, T. 2022. 12. Standardized impact monitoring protocol. Weed Biological Control Series. [Video, 10:21 playtime]. Retrieved from 12. Standardized Impact Monitoring Protocol (SIMP) YouTube
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Basic plant identification. Weed Identification Series. [Video, 8:02 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer**, **M**., Prather, T. and McMahon, T. 2021. Black henbane (*Hyoscyamus niger*). Weed Identification Series. [Video, 3:05 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M.**, Prather, T. and McMahon, T. 2021. Buffalobur (*Solanum rostratum*). Weed Identification Series. [Video, 3:14 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Canada thistle (*Cirsium arvense*). Weed Identification Series. [Video, 3:13 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Common crupina (*Crupina vulgaris*). Weed Identification Series. [Video, 3:13 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
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- Winston, R., **Schwarzländer, M.**, Prather, T. and McMahon, T. 2021. Curlyleaf pondweed (*Potamogeton crispus*). Weed Identification Series. [Video, 2:56 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M**., Prather, T. and McMahon, T. 2021. Dalmatian toadflax (*Linaria dalmatica*). Weed Identification Series. [Video, 3:26 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., Schwarzländer, M., Prather, T. and McMahon, T. 2021. 2020. Diffuse knapweed (Centaurea

- diffusa). Weed Identification Series. [Video, 4:24 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Dyer's woad (*Isatis tinctoria*). Weed Identification Series. [Video, 3:23 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Eurasian watermilfoil (*Myriophyllum spicatum*). Weed Identification Series. [Video, 3:45 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M.**, Prather, T. and McMahon, T. 2021. Field bindweed (*Convolvulus arvensis*). Weed Identification Series. [Video, 2:57 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer**, **M**., Prather, T. and McMahon, T. 2021. Flowering rush (*Butomus umbellatus*). Weed Identification Series. [Video, 3:58 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Hoary alyssum (*Berteroa incana*). Weed Identification Series. [Video, 3:04 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Houndstongue (*Cynoglossum officinale*). Weed Identification Series. [Video, 2:45 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Jointed goatgrass (*Aegilops cylindrica*). Weed Identification Series. [Video, 2:43 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., McMahon, T., Prather. T and **Schwarzländer, M**. 2020. Knotweeds (*Fallopia japonica*, *Fallopia sachalinensis*, and *Fallopia* x *bohemica*). Weed Identification Series. [Video, 5:56 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Leafy spurge (*Euphorbia esula*). Weed Identification Series. [Video, 3:04 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Meadow knapweed (*Centaurea ×moncktonii*). Weed Identification Series. [Video, 3:50 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Mediterranean sage (*Salvia aethiopis*). Weed Identification Series. [Video, 3:22 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Musk thistle (*Carduus nutans*). Weed Identification Series. [Video, 3:45 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Orange hawkweed (*Pilosella aurantiaca*). Weed Identification Series. [Video, 3:07 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Oxeye daisy (*Leucanthemum vulgare*). Weed Identification Series. [Video, 3:06 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Perennial pepperweed (*Lepidium latifolium*). Weed Identification Series. [Video, 3:14 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Perennial sowthistle (*Sonchus arvensis*). Weed Identification Series. [Video, 3:17 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Plumeless thistle (*Carduus acanthoides*). Weed Identification Series. [Video, 4:05 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M.**, Prather, T. and McMahon, T. 2021. Poison hemlock (*Conium maculatum*). Weed Identification Series. [Video, 3:59 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., Schwarzländer, M., Prather, T. and McMahon, T. 2021. Policeman's helmet (Impatiens

- glandulifera). Weed Identification Series. [Video, 3:09 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Puncturevine (*Tribulus terrestris*). Weed Identification Series. [Video, 3:13 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Purple-flowered starthistles (*Centaurea calcitrapa* and *Centaurea iberica*). Weed Identification Series. [Video, 3:27 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M**., Prather, T. and McMahon, T. 2021. Purple loosestrife (*Lythrum salicaria*). Weed Identification Series. [Video, 4:11 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Rush skeletonweed (*Chondrilla juncea*). Weed Identification Series. [Video, 3:33 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M**., Prather, T. and McMahon, T. 2021. Russian knapweed (*Rhaponticum repens*). Weed Identification Series. [Video, 3:39 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Saltcedars (*Tamarix* spp.). Weed Identification Series. [Video, 4:02 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M.**, Prather, T. and McMahon, T. 2021. Scotch broom (*Cytisus scoparius*). Weed Identification Series. [Video, 4:20 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M.**, Prather, T. and McMahon, T. 2021. Scotch thistle (*Onopordum acanthium*). Weed Identification Series. [Video, 3:57 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M.**, Prather, T. and McMahon, T. 2021. Small bugloss (*Anchusa arvensis*). Weed Identification Series. [Video, 3:39 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Spotted knapweed (*Centaurea stoebe*). Weed Identification Series. [Video, 3:43 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Squarrose knapweed (*Centaurea virgata* subsp. *squarrosa*). Weed Identification Series. [Video, 3:46 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Syrian beancaper (*Zygophyllum fabago*). Weed Identification Series. [Video, 3:19 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer**, **M**., Prather, T. and McMahon, T. 2021. Tansy ragwort (*Jacobaea vulgaris*). Weed Identification Series. [Video, 4:39 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Viper's bugloss (*Echium vulgare*). Weed Identification Series. [Video, 3:59 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M.**, Prather, T. and McMahon, T. 2021. Water hyacinth (*Pontederia crassipes*). Weed Identification Series. [Video, 3:37 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. White bryony (*Bryonia alba*). Weed Identification Series. [Video, 2:54 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Whitetop [Hoary cress] (*Lepidium draba*). Weed Identification Series. [Video, 3:56 playtime]. Retrieved from <a href="https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured">https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured</a>
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Yellow flag iris (*Iris pseudacorus*). Weed Identification Series. [Video, 3:19 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer, M**., Prather, T. and McMahon, T. 2021. Yellow-flowered hawkweeds (*Pilosella caespitosa*, *Pilosella glomerata*, and *Pilosella piloselloides*). Weed Identification Series.

- [Video, 4:58 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer**, **M**., Prather, T. and McMahon, T. 2021. Yellow starthistle (*Centaurea solstitialis*). Weed Identification Series. [Video, 5:13 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured
- Winston, R., **Schwarzländer**, **M.**, Prather, T. and McMahon, T. 2021. Yellow toadflax (*Linaria vulgaris*). Weed Identification Series. [Video, 3:31 playtime]. Retrieved from https://www.youtube.com/channel/UC08AY6kpAYhKbrJL0RNrWug/featured

# PowerPoint Course Presentations:

- Schwarzländer, M. 2006. Biological control of spotted and diffuse knapweed and their biocontrol agents. PowerPoint Presentation (89 slides)
- Schwarzländer, M. 2006. Biological control of rush skeletonweed and its biocontrol agents. PowerPoint Presentation (78 slides).
- Schwarzländer, M. 2006. Biological control of purple loosestrife and its biocontrol agents. PowerPoint Presentation (101 slides).
- Schwarzländer, M. 2006. Biological control of Dalmatian and yellow toadflax and their biocontrol agents. PowerPoint Presentation (104 slides).
- Schwarzländer, M. 2006. Biological control of yellow starthistle and its biocontrol agents. PowerPoint Presentation (86 slides).
- Schwarzländer, M. 2006. Biological control of thistles. PowerPoint Presentation (109 slides).

# Symposia or Meetings Organized:

- 'Classical biological control of weeds and arthropods: Evaluation of social, economic and ecological benefits' Invited IOBC Symposium at the XXVI International Congress of Entomology. 17-22 July 2022, Helsinki, Finland. Organizers: Schwarzländer, M. and Mason, P. (12 presentations (3 virtual), 72 participants).
- Joint 3<sup>rd.</sup> Innovations in Invasive Species Management (IISM) and 5<sup>th.</sup>Northern Rockies Invasive Plant Council (NRIPC) Conference, December 10-12, 2019, Coeur d'Alene, Idaho. Organizers: Manning, S., Schwarzländer, M., Haverhals, M.A. (93 presentations, 225 participants).
- 4th Northern Rockies Invasive Plant Council Conference, Rush Skeletonweed & Invasive Mustards Symposia. 17-20 October 2016. Boise, ID. Organizers: Schwarzländer, M., Haverhals, M.A., Pieropan, N., and Milan, J. (87 presentations, 217 participants).
- 'Rise or demise a global outlook on the future of biological weed control' Late-Breaking Symposium at the XXV International Congress of Entomology. 25-30 September 2016. Orlando, FL. Organizers: Schwarzländer, M., Moran, C.W., Hinz, H.L., and Park I. (24 presentations, 62 participants).
- 3<sup>rd</sup> Northern Rockies Invasive Plant Council Conference, Russian Olive & Flowering Rush Symposia. 10-13 February 2014. Airways Heights, WA. Organizers: Schwarzländer, M., Haverhals, M.A., Pieropan, N., and Sing, S. (89 presentations, 186 participants).
- W-2185 USDA Regional Western Workgroup (Biological Control of Plant Pest Systems). 26 October 2010. Coeur d'Alene, ID. Organizer: Schwarzländer, M. (26 presentations, 35 participants).
- 2nd Conference of the Northern Rockies Invasive Plant Council (NRIPC). 26-29 October 2010. Coeur d'Alene, ID. Organizers: Schwarzländer, M., Haverhals, M.A. and Marler, M. (101 presentations, 158 participants).
- 1st Conference of the Northern Rockies Invasive Plant Council (NRIPC). Invasive Species in Natural Areas. 12-14 February 2008. Missoula, MT. Organizers: Schwarzländer, M., Haverhals, M.A. and Marler, M. (61 presentations, 231 participants).
- Biocontrol Task Force Biannual Meetings. 10-11 December 2012, 16 May 2012, 14 November 2011, 11

- May 2011, 1 December 2010, 3 May 2010, 22 October 2009, 17 October 2008 and 30 April 2008. All in Moscow, ID. Organizers: Schwarzländer, M. and Milan, J.D. (7-15 participants).
- Rush Skeletonweed Summit. University of Idaho Water Center. February 21, 2007. Boise, ID. Organizers: Schwarzländer, M., Winston, R.L. and Ferriter, A. (12 presentations, 40 participants).
- Annual Technical Advisory Group (TAG) Meeting. 9-11 September 2003. Spokane, WA. Organizers: Wilson, L., Schwarzländer, M. and Harmon, B.L. Two day meeting including scientific presentations and a one-day field tour. (29 presentations, 50 participants).
- 1st Hoary Cress Consortium Workshop. 12 September 2003. Spokane, WA. Organizers: Schwarzländer, M. and Hinz, H.L. The first workshop included presentations by researchers and graduate students on biological control and invasiveness of *L. draba* and a 2-hour discussion. (6 presentations, 25 participants).
- W1185 Brassicaceae Biocontrol Workshop. Western Region Biological Control Working Group. 1-2 October 2002. Boulder, CO. Organizers: Schwarzländer, M. and Hinz, H.L. Scientific presentations and panel discussion. (5 presentations, 25 participants).

# Non-credit Classes, Workshops, Seminars, Invited Lectures, etc.:

# Educational Youth Camp

- Schwarzländer, M. 3-Day Biological Control Education and Training Youth Camp for Yellow Starthistle (*Centaurea solstitialis*). 1-3 August 2006. University of Idaho, Moscow, Nez Perce Bio-Control Center, Lapwai, and TNC Garden Creek Ranch, ID (9 Participants).
- Schwarzländer, M. 3-Day Biological Control Education and Training Youth Camp for yellow starthistle (*Centaurea solstitialis*). 10-12 August 2005. University of Idaho, Moscow, and TNC Garden Creek Ranch, ID. (15 participants).

### 1-Day Technology Transfer Field Workshops for Tribal Nations

- Schwarzländer, M., Devkota, S., Rushton, J. and Harmon, B. Weed identification and biological control of common crupina. Technology transfer field day for the Nez Perce Tribe. June 21, 2023. (11 participants).
- Schwarzländer, M., Devkota, S., Rushton, J. and Harmon, B. Weed identification and biological control of common crupina. Technology transfer field day for the Confederated Tribes of the Umatilla Indian Reservation. June 27, 2023. (10 participants).
- Schwarzländer, M., Devkota, S., Rushton, J. and Harmon, B. Weed identification and biological control of common crupina. Technology transfer field day for the Nez Perce Tribe. July 11, 2023. (7 participants).
- Schwarzländer, M. and Harmon, B. Weed identification and biological control technology transfer field day for the Nez Perce Tribe. June 16, 2022. (9 participants).
- Schwarzländer, M. and Harmon, B. Weed identification and biological control technology transfer field day for the Pyramid Lake Paiutte Tribe. June 21, 2022 (ONLINE, 12 participants).
- Schwarzländer, M. and Harmon, B. Weed identification and biological control technology transfer field day for the Duck Valley Shoshone-Paiute Tribe. June 22, 2022 (ONLINE, 7 participants).
- Schwarzländer, M. and Harmon, B. Weed identification and biological control technology transfer field day for the Nez Perce Tribe. May 6, 2021. (6 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Hopi Tribal Nation. May 12, 2021 (ONLINE, 7 participants).
- Schwarzländer, M. and Harmon, B. Weed identification and biological control technology transfer field day for the Navajo Nation. May 13, 2021 (8 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field

- day for the Nez Perce Tribe. May 7, 2020. (ONLINE, 4 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Hopi Tribal Nation. May 12, 2020 (ONLINE, 4 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Navajo Nation. May 5, 2020 (4 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Nez Perce Tribe. May 8, 2019, Lapwai, ID. (6 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Blackfoot Tribal Nation. June 11, 2019, Browning, MT (6 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Crow Nation. June 12, 2019, Crow Agency, MT (8 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Nez Perce Tribe. April 24, 2018, Lapwai, ID. (5 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Crow Nation. June 19, 2018, Crow Agency, MT (7 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Blackfoot Tribal Nation. June 20, 2018, Browning, MT (6 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Cheynne River Sioux Nation. May 12, 2017, Cheyenne River, SD. (6 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Nez Perce Tribe. May 16, 2017, Lapwai, ID (9 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Blackfoot Tribal Nation. May 18, 2017, Browning, MT (7 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for teh Blackfeet Nation. April 12, 2016, Browning, MT. (10 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Nez Perce Tribe. April 14, 2016, Lapwai, ID (9 participants).
- Schwarzländer, M. and Haverhals, M. Weed identification and biological control technology transfer field day for the Yakama Nation. April 19, 2016, Topenish, WA (8 participants).
- Schwarzländer, M and Park, I. Weed identification and biological control technology transfer field day for the Navajo Nation. September 15, 2014, Many Farms, AZ. (21 participants).
- Schwarzländer, M and Park, I. Weed identification and biological control technology transfer field day for the Navajo Nation. September 17, 2014, Dennehotso, AZ. (15 participants).
- Schwarzländer, M and Park, I. Weed identification and biological control technology transfer field day for the Navajo Nation. September 18, 2014, Fort Defiance, AZ. (13 participants).
- Schwarzländer, M and Park, I. Weed identification and biological control technology transfer field day for the Navajo Nation. September 19, 2014, Shiprock, NM. (10 participants).
- Schwarzländer, M and Park, I. Weed identification and biological control technology transfer field day for the Blackfeet Nation. July 16, 2014, Browning, MT. (13 participants).
- Schwarzländer, M. and Haverhals, M.A. Tribal Workshop: Weed Biological Control for the Moapa Paiute Tribal Nation. 11 September 2013. Moapa Paiute Travel Plaza, NV. (7 participants).
- Schwarzländer, M. and Haverhals, M.A. Tribal Workshop: Weed Biological Control for the Moapa Paiute Tribal Nation. 19 March 2013. Moapa Paiute Travel Plaza, NV. (13 participants).
- Schwarzländer, M. and Haverhals, M.A. Tribal Workshop: Weed Biological Control for the Crow Tribal Nation. 9 September 2013. Crow Agency, MT. (10 participants).
- Schwarzländer, M. and Haverhals, M.A. Tribal Workshop: Weed Biological Control for the Crow Tribal

- Nation. 29 August 2012. Crow Agency, MT. (39 participants).
- Schwarzländer, M. and Haverhals, M.A. Tribal Workshop: Weed Biological Control for the Moapa Paiute Tribal Nation. 30 August 2012. Moapa Paiute Travel Plaza, NV. (7 participants).
- Schwarzländer, M. and Haverhals, M.A. Tribal Workshop: Weed Biological Control for the Kaibab-Paiute Tribal Nation. 1 August 2012. Fredonia, AZ. (8 participants).
- Schwarzländer, M. and Haverhals, M.A. Tribal Workshop: Weed Biocontrol Implementation for Unitah and Ouray Tribal Bands. 19 August 2011. Ft. Duchesne, UT. (7 participants).
- Schwarzländer, M. and Haverhals, M.A. Tribal Workshop: Weed Biocontrol Implementation for West and Ely Shoshone Tribal Bands. 18 August 2011. Elko, NV. (11 participants).
- Schwarzländer, M. and Haverhals, M.A. Tribal Workshop: Weed Biocontrol Implementation for Paiute Tribal Bands. 17 August 2011. St. George, UT. (9 participants).
- Schwarzländer, M. and Haverhals, M.A. Biocontrol Monitoring Training. 21 June 2010. Pine Ridge, SD. (12 participants).
- Schwarzländer, M. and Haverhals, M.A. Biocontrol Monitoring Training. 21 June 2010. Rosebud, SD. (13 participants). Schwarzländer, M. and Haverhals, M.A. Biocontrol Monitoring Training. 22 June 2010. Lower Brule, SD. (14 participants).
- Schwarzländer, M. and Haverhals, M.A. Biocontrol Monitoring Training. 22 June 2010. Crow Creek, SD. (10 participants).
- Schwarzländer, M. and Haverhals, M.A. Biocontrol Monitoring Training. 23 June 2010. Cheyenne River, SD. (9 participants).
- Schwarzländer, M. and Haverhals, M.A. Biocontrol Monitoring Training. 24 June 2010. Standing Rock, ND. (15 participants).
- Schwarzländer, M. and Haverhals, M.A. Biocontrol Monitoring Training. 25 June 2010. Sisseton, SD. (13 participants).
- Schwarzländer, M. and Haverhals, M.A. Biocontrol Monitoring Training. 26 June 2010. Yankton, SD. (11 participants).
- Schwarzländer, M. and Harmon, B.L. Technology Transfer Workshop for Biocontrol Monitoring Training. 15 June 2009. Pine Ridge, SD. (5 participants).
- Schwarzländer, M. and Harmon, B.L. Technology Transfer Workshop for Biocontrol Monitoring Training. 15 June 2009. Rosebud, SD. (5 participants).
- Schwarzländer, M. and Harmon, B.L. Technology Transfer Workshop for Biocontrol Monitoring Training. 16 June 2009. Yankton, SD. (4 participants).
- Schwarzländer, M. and Harmon, B.L. Technology Transfer Workshop for Biocontrol Monitoring Training. 16 June 2009. Flandreau, SD. (3 participants).
- Schwarzländer, M. and Harmon, B.L. Technology Transfer Workshop for Biocontrol Monitoring Training. 15 June 2009. Sisseton, SD. (3 participants).
- Schwarzländer, M. and Harmon, B.L. Technology Transfer Workshop for Biocontrol Monitoring Training. 16 June 2009. Standing Rock, SD. (5 participants).
- Schwarzländer, M. and Harmon, B.L. Technology Transfer Workshop for Biocontrol Monitoring Training. 17 June 2009. Cheyenne River, SD. (3 participants).
- Schwarzländer, M. and Harmon, B.L. Technology Transfer Workshop for Biocontrol Monitoring Training. 18 June 2009. Lower Brule, SD. (4 participants).
- Schwarzländer, M. and Harmon, B.L. Technology Transfer Workshop for Biocontrol Monitoring Training. 19 June 2009. Crow Creek, SD. (3 participants).
- Schwarzländer, M. and Haverhals, M.A. Technology Transfer Workshop for Biocontrol Monitoring Training. 19 September 2009. Pine Ridge, SD. (5 participants).

- Schwarzländer, M. and Haverhals, M.A. Technology Transfer Workshop for Biocontrol Monitoring Training. 20 September 2009. Rosebud, SD. (5 participants).
- Schwarzländer, M. and Haverhals, M.A. Technology Transfer Workshop for Biocontrol Monitoring Training. 21 September 2009. Lower Brule, SD. (4 participants).
- Schwarzländer, M. and Haverhals, M.A. Technology Transfer Workshop for Biocontrol Monitoring Training. 22 September 2009. Crow Creek, SD. (3 participants).
- Schwarzländer, M. and Haverhals, M.A. Technology Transfer Workshop for Biocontrol Monitoring Training. 23 September 2009. Standing Rock, SD. (5 participants).
- Schwarzländer, M. and Haverhals, M.A. Technology Transfer Workshop for Biocontrol Monitoring Training. 24 September 2009. Cheyenne River, SD. (3 participants).
- Schwarzländer, M. and Haverhals, M.A. Technology Transfer Workshop for Biocontrol Monitoring Training. 25 September 2009. Yankton, SD. (4 participants).
- Schwarzländer, M. and Haverhals, M.A. Technology Transfer Workshop for Biocontrol Monitoring Training. 26 September 2009. Sisseton, SD. (3 participants).
- Schwarzländer, M. and Haverhals, M.A. Technology Transfer Workshop for Biocontrol Monitoring Training. 27 September 2009. Flandreau, SD. (4 participants).
- Schwarzländer, M. One-Day Biological Control Technology Transfer Workshop for leafy spurge (Euphorbia esula) and Saltcedar (Tamarix spp.). 3 June 2008. St. George, UT. (12 participants).
- Schwarzländer, M. One-Day Biological Control Technology Transfer Workshop for knapweeds (*Centaurea* and *Acrotylon* spp.) and Saltcedar (*Tamarix* spp.). 4 June 2008. Las Vegas, NV. (14 participants).
- Schwarzländer, M. One-Day Biological Control Technology Transfer Workshop for thistles (*Cirsium* and *Carduus* spp.) and Dalmatian Toadflax (*Linaria dalmatica*). 10 June 2008. Flagstaff, AZ. (30 participants).
- Schwarzländer, M. One-Day Biological Control Technology Transfer Workshop for thistles (*Cirsium* and *Carduus* spp.). 17 June 2008. Red Lake, MN. (8 participants).
- Schwarzländer, M. One-Day Biological Control Technology Transfer Workshop for thistles (Cirsium and Carduus spp.). 19 June 2008. Muskogee, OK. (16 participants).
- Schwarzländer, M. One-Day Biological Control Technology Transfer Workshop for thistles (*Cirsium* and *Carduus* spp.). 25 June 2008. Gardnerville, NV. (15 participants).
- Szücs, M. and Schwarzländer, M. One-Day Biological Control Technology Transfer Workshop for spotted knapweed (*Centaurea stoebe*). 26 July 2008. Coeur d'Alene, ID. (23 participants).
- Brown, L.S. and Schwarzländer, M. One-Day Biological Control Technology Transfer Workshop for spotted knapweed (*Centaurea stoebe*). 27 August 2008. St. Maries, ID. (14 participants).
- Schwarzländer, M. Technology Transfer Workshop: Biology and biological control of leafy spurge (*Euphorbia esula*) on rangeland. 25 June 2007. North Central region: South Dakota. Mission, SD. (16 participants).
- Schwarzländer, M. Technology Transfer Workshop: Biology and biological control of leafy spurge (*Euphorbia esula*) on rangeland. 26 June 2007. North Central region: South Dakota. Pine Ridge, SD. (8 participants).
- Schwarzländer, M. Technology Transfer Workshop: Biology and biological control of Canada thistle (*Cirsium arvense*) on rangeland. 27 June 2007. North Central region: South Dakota. Eagle Butte, SD. (9 participants).
- Schwarzländer, M. Technology Transfer Workshop: Biology and biological control of Saltcedar (*Tamarix* spp.) and Canada thistle (*Cirsium arvense*) on rangeland and in riparian areas. 28 June 2007. North Central region: South Dakota. Mobridge, SD. (22 participants).
- Szűcs, M. and Schwarzländer, M. Technology Transfer Workshop: Biology and biological control of

- spotted knapweed (*Centaurea stoebe*) on rangeland. 20 July 2007. Western region: Idaho. Coeur d'Alene, ID.
- Brown, L.S. and Schwarzländer, M. Technology Transfer Workshop: Biology and biological control of spotted knapweed (*Centaurea stoebe*) on rangeland. 26 July 2007. Western region: Idaho. St. Maries, ID. (7 participants).
- Szűcs, M. and Schwarzländer, M. Technology Transfer Workshop: Biology and biological control of spotted knapweed (*Centaurea stoebe*) on rangeland. 23 August 2007. Western region: Idaho. Bonners Ferry, ID. (30 participants).
- Brown, L.S. and Schwarzländer, M. Technology Transfer Workshop: Biology and biological control of spotted knapweed (*Centaurea stoebe*) on rangeland. 29 August 2007. Western region: Idaho. Coeur d'Alene, ID. (20 participants).
- Schwarzlaender, M. and Allen, R. Purple Loosestrife Biocontrol Technology Transfer Workshop. 6 July 2006. Weiser, ID. (47 Participants).
- Schwarzlaender, M. and Allen, R. Leafy Spurge Biocontrol Technology Transfer Workshop. 10 July 2006. Aberdeen, ID. (16 Participants).
- Schwarzlaender, M. and Allen, R. Leafy Spurge Biocontrol Technology Transfer Workshop. 11 July 2006. Rexburg, ID. (33 Participants).
- Schwarzlaender, M. and Allen, R. Purple Loosestrife Biocontrol Technology Transfer Workshop. 18 July 2006. Nixon, NV. (21 Participants).
- Schwarzlaender, M. and Allen, R. Leafy Spurge Biological Control Technology Transfer Workshop. 20 July 2006. Elko, NV. (12 Participants).
- Schwarzlaender, M. and Allen, R. Biological Control Technology Transfer Workshops for Spotted Knapweed (*Centaurea stoebe*). 27 July 2006. Sandpoint, ID. (19 Participants).
- Schwarzlaender, M. and Allen, R. Biological Control Technology Transfer Workshops for Spotted Knapweed (*Centaurea stoebe*). 28 July 2006. Coeur d'Alene, ID. (20 Participants).
- Schwarzlaender, M. and Allen, R. Spotted Knapweed and Leafy Spurge Biological Control Technology Transfer Workshop. 8 August 2006. Fort Yates, ND. (11 Participants).
- Schwarzlaender, M. and Allen, R. Spotted Knapweed and Leafy Spurge Biological Control Technology Transfer Workshop. 9 August 2006. New Town, ND. (8 Participants).
- Schwarzlaender, M. and Allen, R. Spotted Knapweed and Leafy Spurge Biological Control Technology Transfer Workshop. 10 August 2006. Belcourt, ND. (12 Participants).
- Schwarzlaender, M. and Allen, R. Spotted Knapweed and Leafy Spurge Biological Control Technology Transfer Workshop. 11 August 2006. Fort Totten, ND. (9 Participants).
- Schwarzlaender, M. and Allen, R. Biological Control Technology Transfer Workshop for Spotted Knapweed (*Centaurea stoebe*). 15 August 2006. St. Maries, ID. (18 Participants).
- Schwarzlaender, M. and Allen, R. Biological Control Technology Transfer Workshops for Spotted Knapweed (*Centaurea stoebe*). 28 August 2006. Sandpoint, ID (15 Participants).
- Schwarzlaender, M. and Allen, R. Diffuse and Spotted Knapweed (*Centaurea diffuse* and *C. maculosa*). Biocontrol Technology Transfer Workshop. 29 August 2006. Coeur d'Alene, ID. (11 Participants).
- Schwarzländer, M. and Allen, R. Diffuse and spotted knapweed (*Centaurea stoebe*) Biocontrol Technology Transfer Workshop. 2 June 2005. Lapwai, ID. (18 participants).
- Schwarzländer, M. and Allen, R. Dalmatian toadflax (*Linaria dalmatica*) Biocontrol Technology Transfer Workshop. 9 June 2005. Hailey, ID. (11 participants).
- Schwarzländer, M. and Allen, R. Diffuse and spotted knapweed (*Centaurea diffusa and C. stoebe*) Biocontrol Technology Transfer Workshop. 11 June 2005. Coeur d'Alene, ID. (19 participants).
- Schwarzländer, M. and Allen, R. Diffuse and spotted knapweed (*Centaurea diffusa and C. stoebe*) Biocontrol Technology Transfer Workshop. 13 June 2005. Sandpoint, ID. (31 participants).

- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for Dalmatian toadflax (*Linaria dalmatica*). 16 June 2005. Coeur d'Alene, ID. (26 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for spotted knapweed (*Centaurea stoebe*). 17 June 2005. Coeur d'Alene, ID. (29 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for spotted knapweed (*Centaurea stoebe*). 21 June 2005. Fort Hall, ID. (37 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for spotted knapweed (*Centaurea stoebe*). 22 June 2005. Mountain Home, ID. (26 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for spotted knapweed (*Centaurea stoebe*). 23 June 2005. Hailey, ID. (16 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for yellow starthistle (*Centaurea solstitialis*), Dalmatian toadflax (*Linaria dalmatica*), and spotted knapweed (*Centaurea stoebe*). 7 July 2005. Fraser Range, ID. (28 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for spotted knapweed (*Centaurea stoebe*) and yellow starthistle (*Centaurea solstitialis*). 7 July 2005. Burney, CA. (9 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for Russian knapweed (*Acroptilon repens*) and spotted knapweed (*Centaurea stoebe*). 12 July 2005. Farmington, NM. (18 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for spotted knapweed (*Centaurea maculosa*). 13 July 2005. Dulce, NM. (12 participants).
- Schwarzländer, M. and Allen, R. Diffuse and spotted knapweed (*Centaurea diffuse* and *C. stoebe*). Biocontrol Technology Transfer Workshop. 19 July 2005. Toppenish, WA. (47 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for Purple Loosestrife (*Lythrum salicaria*). 21 July 2005. Boise, ID. (18 participants).
- Schwarzländer, M. and Allen, R. Biological Control Technology Transfer Workshops for Purple Loosestrife (*Lythrum salicaria*). 22 July 2005. Twin Falls, ID. (15 participants).
- Schwarzländer, M. and Allen, R. One-Day Biological Control Technology Transfer Workshop for Purple Loosestrife (*Lythrum salicaria*). 1 August 2005. Wagner, SD. (6 participants).
- Schwarzländer, M. and Allen, R. One-Day Biological Control Technology Transfer Workshop for Canada thistle (*Cirsium arvense*) and Leafy Spurge (*Euphorbia esula*). 4 August 2005. Eagle Butte, SD. (16 participants).

# 1-Day Technology Transfer Field Workshops

- Schwarzländer, M. Knapweed Technology Transfer Workshop. 14 June 2004. Coeur d'Alene, ID. (17 participants)
- Schwarzländer, M. Toadflax Technology Transfer Workshop. 15 June 2004. Coeur d'Alene, ID. (23 participants).
- Schwarzländer, M. Yellow Starthistle Technology Transfer Workshop. 30 June 2004. Whitebird, ID. (24 participants).
- Schwarzländer, M. Yellow Starthistle Technology Transfer Workshop. 1 July 2004. Lapwai, ID. (18 participants).
- Schwarzländer, M. Yellow Starthistle Technology Transfer Workshop. 2 July 2004. Lapwai, ID. (8 participants).
- Schwarzländer, M. Spotted Knapweed Technology Transfer Workshop. 9 July 2004. Lapwai, ID. (11 participants).
- Schwarzländer, M. Spotted Knapweed Technology Transfer Workshop. 20 July 2004. Shelley, ID. (29 participants).

- Schwarzländer, M. Spotted Knapweed Technology Transfer Workshop. 22 July 2004. Salmon, ID. (19 participants).
- Schwarzländer, M. Yellow Starthistle Technology Transfer Workshop. 28 July 2004. Toppenish, WA. (16 participants).
- Schwarzländer, M. Purple Loosestrife Technology Transfer Workshop. 3 August 2004. Santee, NE. (8 participants).
- Schwarzländer, M. Spotted Knapweed Technology Transfer Workshop. 9 August 2004. Lapwai, ID. (10 participants).
- Schwarzländer, M. Spotted Knapweed Technology Transfer Workshop. 11 August 2004. Sandpoint, ID. (13 participants).
- Schwarzländer, M. Spotted Knapweed Technology Transfer Workshop. 13 August 2004. Coeur d'Alene, ID. (13 participants).
- Schwarzländer, M. Workshop and field day Biological control of spotted knapweed. UI Field Day Workshop. 19 June 2003. Coeur d'Alene, ID. (30 participants).
- Schwarzländer, M. Workshop and field day Biological control of spotted knapweed. UI Field Day Workshop. 20 June 2003. Sandpoint, ID. (35 participants).
- Schwarzländer, M. Workshop and field day Biological control of yellow toadflax. UI Field Day Workshop. 26 June 2003. Soda Springs, ID. (18 participants).
- Schwarzländer, M. Workshop and field day Biological control of yellow starthistle. UI Field Day Workshop. 1 July 2003. Lapwai, ID. (6 participants)
- Schwarzländer, M. Workshop and field day Biological control of yellow starthistle. UI Field Day Workshop. 18 July 2003. Lapwai, ID. (26 participants).
- Schwarzländer, M. Workshop and field day Biological control of purple loosestrife. UI Field Day Workshop. 25 July 2003. Boise, ID. (38 participants).
- Schwarzländer, M. and Kuykendall, C. Workshop and field day Biological control of spotted knapweed. UI and Nez Perce Biocontrol Center Workshop. 18 July 2002. Coeur d'Alene, ID.
- Schwarzländer, M. and Kuykendall, C. Workshop and field day Biological control of purple loosestrife. UI and Nez Perce Biocontrol Center Workshop. 23 July 2002. New Plymouth, ID.
- Schwarzländer, M. and Kuykendall, C. Workshop and field day Biological control of purple loosestrife. UI and Nez Perce Biocontrol Center Workshop. 24 July 2002. New Plymouth, ID.
- Schwarzländer, M. and Kuykendall, C. Workshop and field day Biological control of diffuse knapweed. UI and Nez Perce Biocontrol Center Workshop. 25 July 2002. Twin Falls, ID.

## Other Extension Seminars and Presentations

- Schwarzländer, M. and Milan, J. Biocontrol quiz. Idaho Weed Control Association. January 18, 2018, Boise, ID. *Oral Presentation*. (25 participants).
- Schwarzländer, M. and Milan, J. Biocontrol quiz. Idaho Weed Control Association. January 19, 2017, Boise, ID. *Oral Presentation*.(15 participants).
- Schwarzländer, M. and Milan, J. Biocontrol quiz. Idaho Weed Control Association. February 1, 2016, Boise, ID. *Oral Presentation*.(21 participants).
- Schwarzländer, M. and Milan, J. Biocontrol quiz. Idaho Weed Control Association. January 31, 2015, Boise, ID. *Oral Presentation*. (18 participants).
- Schwarzländer, M. and Milan, J. Biocontrol quiz. Idaho Weed Control Association. February 5-6, 2014, Boise, ID. *Oral Presentation*. (29 participants).
- Schwarzländer, M. Spring Biocontrol Task Force meeting. May 5-6, 2014, Moscow, ID. (12 participants).
- Schwarzländer, M. Fall biocontrol Task Force Meeting. December 16, 2014, Boise, ID. (12 participants).

- Schwarzländer, M. Biology and biocontrol of Dalmatian toadflax. Current topics in forest health 2014. December 19, 2014, Coeur d'Alene, ID. (80 participants).
- Park, I. and Schwarzländer, M. Houndstongue research at Idler's Rest Field Day. Palouse Land Trust. June 14, 2014, Moscow, ID. *Oral Presentation*. (15 participants).
- Schwarzländer, M. and Haverhals, M.A. Technology transfer field day for the Inter-ministry Invasive Plant Working Group Ministry of Forests, Lands and Natural Resources Operations Range Branch. June 18, 2014, Nelson, BC, Canada. (15 participants).
- Prenn-Vasilakis, C. and Schwarzländer, M. Constructing a survey on public perceptions of biolgocial weed control in the state of Idaho. CRISSP REU final presentation. August 6, 2014, Moscow, ID. *Oral Presentation*. (20 participants).
- Schwarzländer, M. Fall invasive species tour. September 11, 2014, Sandpoint, ID. *Invited oral Presentation*. (15 participants).
- Schwarzländer, M. What's down the road for biocontrol. Oregon Interagency Noxious Weed Symposium. December 3, 2014, Corvallis, OR. *Invited oral Presentation*. (160 participants).
- Schwarzländer, M. and Hinz, H.L. Foreign exploration research for biological control. Annual Conference of the Montana Weed Control Association. 10 January 2012. Great Falls, MT. (60 participants).
- Haverhals, M.A. and Schwarzländer, S. Free biocontrol resources. Annual Conference of the Montana Weed Control Association. 11 January 2012. Great Falls, MT. (50 participants).
- Schwarzländer, M. and Randall, C.B. Biological control 101 workshop. Annual Conference of the Montana Weed Control Association. 10 January 2012. Great Falls, MT. 90 minutes. 30 participants.
- Haverhals, M.A., Schwarzländer, M. and Harmon, B.L. Free biocontrol resources. 65th Annual Meeting of the Society for Range Management. 29 January 3 February 2012. Information booth. (130 participants).
- Milan, J.D. and Schwarzländer, M. Weed biocontrol agent and target quiz. Annual Idaho Weed Conference. 02 February, 2012. Boise, ID. (75 participants).
- Schwarzländer, M. and Haverhals, M.A. Biological control of noxious weeds on tribal lands. BIA National Tribal Natural Resource Meeting. 9 February 2012. Phoenix, AZ. (25 participants).
- Schwarzländer, M. Biological control research update. Clearwater Basin Noxious Weed Clinic. 29 February 2012. Orofino, ID. (55 participants).
- Schwarzländer, M. Biological control research update. Clearwater Basin Noxious Weed Clinic. 1 March 2012. Lewiston, ID. (70 participants).
- Schwarzländer, M. and Haverhals, M.A. Biological control of weeds: EDDMapS biocontrol. Annual Conference of the Missouri Watershed Coalition. 13 June 2012. Sturgis, SD. (25 participants).
- Schwarzländer, M. International outlook. Oregon Interagency Noxious Weed Symposium. 6 December 2012. Corvallis, OR.
- Schwarzländer, M. Weed biocontrol implementation and outreach on USFS lands. USDA Forest Service FHP Headquarter. 25 January 2011. Washington, DC. (5 participants).
- Schwarzländer, M. National standards for biological weed impact monitoring. FICMNEW. 26 January 2011. Washington, DC. (16 participants).
- Schwarzländer, M. Biological control of noxious weeds on tribal lands. BIA National Tribal Range Resource Meeting. 3 February 2011. Phoenix, AZ. (32 participants).
- Schwarzländer, M. Weed biocontrol agent and target quiz. Idaho Weed Conference. 2 March 2011. Boise, ID. (59 participants).
- Schwarzländer, M., Haverhals, M.A. and Randall, C.B. National biocontrol release records & EDD-MapS. Meeting with US Forest Service, USFS, UI, UofG and MIA. 21-23 June 2011. Moscow, ID. (12 participants).
- Schwarzländer, M. Biocontrol consortia and research update. Idaho Weed Summit. Boise, ID. (35

- participants).
- Schwarzländer and Hinz, H.L. Biological control of houndstongue. Wyoming Weed and Pest Conference. 9 November 2011. Gillette, WY. (30 participants).
- Schwarzländer, M. Weed biocontrol consortia. Western Weed Coordinating Committee Annual Meeting. 1 December 2011. Las Vegas, NV. (25 participants).
- Schwarzländer, M. Biocontrol agent quiz. Idaho Weed Conference. 3 February 2010. Burley, ID (64 participants).
- Schwarzländer, M. Idaho Biocontrol Task Force Meeting. 04 February 2010. Burley, ID (14 participants).
- Schwarzländer, M. Biological control of Noxious Weeds. Great Plains and Rocky Mountain Regions BIA and Tribal Conference. 28 April 2010. Rapid City, SD. (109 participants).
- Schwarzländer, M. Idaho's standardized impact monitoring protocol SIMP. Washington County Legislative Tour. 17 May 2010. Weiser, ID (51 participants).
- Schwarzländer, M. and Gibson, R. Dyer's woad research in Idaho. National USDA FS Evaluation Meeting. 13 July 2010. Preston, ID (34 participants).
- Schwarzländer, M. and Weed, A.S. *Mecinus janthinus* monitoring and SIMP. National USDA FS Evaluation Meeting. 13 July 2010. Preston, ID (32 participants).
- Weed, A.S. and Schwarzländer, M. Spatial patterns of attack by the stem-mining weevil, *Mecinus janthinus*, on Dalmatian toadflax in the northwestern U.S. Invasive Weed Ecology and Biocontrol Consortia Meeting: Dalmatian toadflax (*Linaria dalmatica*) and yellow toadflax (*L. vulgaris*) 2<sup>nd</sup> Invasive Species in Natural Areas Conference. 26 October 2010. Coeur d'Alene, ID (65 participants).
- Schwarzländer, M. Differential resistance of the invasive skeletonweed biotypes to accessions of the skeletonweed rust. Invasive Weed Ecology & Biocontrol Consortia Meeting: Rush skeletonweed (*Chondrilla juncea*) 2<sup>nd</sup> Invasive Species in Natural Areas Conference. 26 October 2010. Coeur d'Alene, ID (27 participants).
- Harmon, B.L. and Schwarzländer, M. Releasing the skeletonweed root moth *Bradyrrhoa gilveolella*. Invasive Weed Ecology & Biocontrol Consortia Meeting: Rush skeletonweed (*Chondrilla juncea*) 2<sup>nd</sup> Invasive Species in Natural Areas Conference. 26 October 2010. Coeur d'Alene, ID. (27participants).
- Rapo, C., Eigenbrode, S.D., Gaskin, J.F., Hinz, H.L., Schwarzalender, M. and Schaffner, U. New tools to predict the host range of potential biocontrol agents of hoary cress. Invasive Weed Ecology & Biocontrol Consortia Meeting: Hoary cress (*Lepidium draba*), perennial pepperweed (*L. latifolium*) and dyer's woad (*Isatis tinctoria*) 2<sup>nd</sup> Invasive Species in Natural Areas Conference. 26 October 2010. Coeur d'Alene, ID (29 participants).
- Schwarzländer, M. Biocontrol monitoring for Dalmatian toadflax. Wyoming Weed and Pest Conference, Cheyenne, WY" Wyoming Weed and Pest Conference, 18 November 2010. Cheyenne, WY. (64 participants).
- Schwarzländer, M. Hope for houndstongue biological control? Wyoming Weed and Pest Conference. 18 November 2010. Cheyenne, WY. (26 participants).
- Schwarzländer, M. What is hot in weed biocontrol and what is not. South Dakota Weed and Pest Supervisor Training. 18 February 2009. Rapid City, SD. (130 participants).
- Schwarzländer, M. Biocontrol impact evaluation made easy a monitoring program for everyone. South Dakota Weed and Pest Supervisor Training. 19 February 2009. Rapid City, SD. (60 participants).
- Schwarzländer, M. Impact monitoring for invasive toadflaxes. Wyoming Weed and Pest Conference, 10 November 2009, Cheyenne, WY. (28 participants).
- Schwarzländer, M. Biological control of houndstongue. Wyoming Weed and Pest Conference, 18 November 2009, Cheyenne, WY. (57 participants).
- Schwarzländer, M. Potential for biological control of houndstongue. Montana Weed Control Association, 16 January 2008. Great Falls, MT. (95 participants).

- Schwarzländer, M. Biolgocial control of noxious weeds. Great Plains and Rocky Mountains Natural Resource Conference. 10 April 2008. Rapid City, SD (49 participants).
- Schwarzlaender, M. Biocontrol of perennial mustards. Oregon Interagency Noxious Weed Symposium. 3 December 2008. Corvallis, OR. (114 participants).
- Schwarzländer, M. Biological control of houndstongue. Wyoming Weed and Pest Conference. 4 November 2008. Riverton, WY. (45 participants).
- Schwarzländer, M. Hawkweed consoritum update. Wyoming Weed and Pest Conference. 4 November 2008. Riverton, WY. (15 participants).
- Schwarzländer, M. Biological control of rush skeletonweed. Rush Skeletonweed Summit. University of Idaho Water Center. 21 February 2007. Boise, ID. (39 participants).
- Schwarzländer, M. Efficient biological control agents to control selected weeds in Idaho. CWMA Weed Warrior Training Workshop. 12 June, 2007. Idaho Falls, ID. (70 participants).
- Schwarzländer, M. and Hinz, H.L. Basics in biological control agent development, collection and redistribution. CWMA Weed Warrior Training Workshop. 12 June 2007. Idaho Falls, ID. (48 participants).
- Schwarzländer, M. Biological control principles and the potential for biological control of Eurasian watermilfoil. Aquatic Plant Control Seminar Ask the Experts! 23 August, 2007. Sandpoint, ID. (40 participants).
- Schwarzländer, M. Potential for biological control of houndstongue. Wyoming Weed and Pest Conference. 8 November 2007. Jackson, WY.
- Schwarzländer, M. How can we more effectively manage rush skeletonweed? Joseph Plain Weed Management Area. 23 January 2006. Grangeville, ID. (21 participants).
- Winston, R.L. and Schwarzländer, M. Biological Control research on yellow starthistle. Joseph Plain Weed Management Area, 23 January 2006. Grangeville, ID. (21 participants).
- Schwarzländer, M. Biological control of weeds implementation in South Dakota. South Dakota State Weed Conference. 11-12 February 2006. Rapid City, SD. (120 participants).
- Schwarzländer, M. Tansy ragwort biocontrol. Palouse CWMA Meeting. 9 March 2006. Potlatch, ID. (13 participants).
- Schwarzländer, M. Tansy ragwort biocontrol. Palouse CWMA Meeting. 11 May 2006. Potlatch, ID. (10 participants).
- Schwarzländer, M. Tansy ragwort biocontrol. Palouse CWMA Meeting. 7 June 2006. Potlatch, ID. (8 participants).
- Schwarzländer, M. Great Plains Region Annual BIA Tribal Trustee Meeting. 23-24 October 2006. (23 participants).
- Schwarzländer, M. Biocontrol of Dalmatian toadflax, yellow starthistle in the Hells Canyon Ecosystem. Tri-State Weed Demonstration Area Meeting. 10 November 2006. Lewiston, ID. (19 participants).
- Schwarzländer, M. Research on the biological control of mustard weeds (perennial pepperweed, hoary cress, and dyer's woad). Oregon Interagency Noxious Weed Symposium. 5 December 2006. Corvallis, OR. (105 participants).
- Schwarzländer, M. Biological control of weeds Technology Transfer Workshops. National BIA Resource Manager Meeting. 1 February 2005. Phoenix, AZ. (19 participants).
- Schwarzländer, M. Weed biocontrol. Inland Empire Cooperative Weed Management Area. 10 April 2004. Coeur d'Alene, ID. (39 participants).
- Schwarzländer, M. Weed biocontrol. Inland Empire Cooperative Weed Management Area. 9 March 2004. Coeur d'Alene, ID. (78 participants).
- Schwarzländer, M. Biological Control of Weeds Technology Transfer Workshops Experiences in the West. Eastern Regional BIA Office Trust Resources Workshop. 24-26 August 2004. Nashville, TN.

- (48 participants).
- Schwarzländer, M. Biological control of noxious weeds. 25<sup>th</sup> Annual Intermountain Container Seedling Grower's Association Meeting. 19 October 2004. Lewiston, ID. (45 participants).
- Schwarzländer, M. Biological weed control workshops the University of Idaho/Nez Perce Bio-Control Center partnership. 2004 Great Plains Region Annual BIA Tribal Trustee Meeting. 27-28 October 2004. Aberdeen, SD. (42 participants).
- Schwarzländer, M. Biological control of weeds hoary cress and dyers woad. Cooperative Idaho Utah Weed Management Area. 22 January 2003. Pocatello, ID. (55 participants).
- Schwarzländer, M. Biological control of weeds: 1) Principles & methods, 2) New projects. BLM Pesticide Training. 27 January 2003. Boise, ID. (61 participants).
- Schwarzländer, M. Steps in the development of new biocontrol agents for weeds and optimal release techniques. Idaho Weed Conference UI Pre-conference Weed School. 6 February 2003. Nampa, ID. (145 participants).
- Schwarzländer, M. Biological control of houndstongue Program update. Wyoming Weed and Pest Supervisor Spring Meeting. 1 April 2003. Jackson, WY. (45 participants).
- Schwarzländer, M. 30 months of hoary cress consortium What has been accomplished. Wyoming Weed and Pest Supervisor Meeting. 1 April 2003. Jackson, WY. (55 participants).
- Schwarzländer, M. 12 facts about biological control of weeds in 60 minutes. University of Idaho Cooperative Extension System. 3 May 2003. Sandpoint, ID. (95 participants).
- Schwarzländer, M. Hoary cress research and consortium update. Wyoming Weed and Pest Supervisor Fall Meeting. 27 October 2003. Cody, WY. (45 participants).
- Schwarzländer, M. Biological control of rangeland weeds with insects in Northern Idaho. University of Idaho Cooperative Extension System. 13 March 2002. Bonners Ferry, ID.
- Schwarzländer, M. Biological control of rangeland weeds with insects in Northern Idaho. University of Idaho Cooperative Extension System. 13 March 2002. Sandpoint, ID.
- Schwarzländer, M. Biological control of rangeland weeds with insects in Northern Idaho. University of Idaho Cooperative Extension System. 14 March 2002. Coeur d'Alene, ID.
- Schwarzländer, M. Biological control of rangeland weeds with insects in Northern Idaho. University of Idaho Cooperative Extension System. 14 March 2002. Plummer, ID.
- Schwarzländer, M. Biological control of weed principles using crucifer weeds and houndstongue as example. South East Idaho Weed Control Association. 14 November 2002. Idaho Falls, ID. (115 participants).
- Schwarzländer, M. Biological control of weeds. Plant Protection Seminar. 13 November 2001. Twin Falls, ID.
- Schwarzländer, M. and Prather, T.S. Supporting the CWMA process. Weed Biocontrol Program Introduction. CWMA Cost Share Meeting. 17 October 2000. Coeur d'Alene, ID.
- Schwarzländer, M. and Prather, T.S. Supporting the CWMA process. Weed Biocontrol Program Introduction. CWMA Cost Share Meeting. 18 October 2000. Lewiston, ID.
- Schwarzländer, M. and Prather, T.S. Supporting the CWMA Process. Weed Biocontrol Program Introduction. CWMA Cost Share Meeting. 19 October 2000. Boise, ID.
- Schwarzländer, M. Biological control of weeds. Plant Protection Seminar. 14 November 2000. Idaho Falls, ID.
- Schwarzländer, M. New insects for weed biocontrol in Idaho. Eastern Idaho Weed Control Association Annual Meeting. 15 November 2000. Idaho Falls, ID.
- Schwarzländer, M. New insect biocontrol agents for biological control of weeds in Idaho. Eastern Idaho Weed Control Association Annual Meeting. 15 November 2000. Idaho Falls, ID.

#### **SCHOLARSHIP ACCOMPLISHMENTS:**

#### **Publications:**

- Refereed or Adjudicated (\* Denotes Graduate Student, Postdoctoral Fellow):
- \*Subedi, B., **Schwarzländer**, **M.**, Eigenbrode, S.D., Harmon, B.L., and Weyl, P. Studies on the host selection of a weed biological control candidate facilitate pre-release environmental safety assessments. *BioControl*. Accepted.
- **Schwarzländer, M.** and Mason, P.G. Synthesis and assessments of social, economic and ecological benefits facilitate classical biological control of weeds and arthropods. *BioControl*. Accepted.
- \*Park, I., Schwarzländer, M., Eigenbrode, S.D., Harmon, B.L., Hinz, H.L. and Schaffner, U. Non-destructive environmental safety assessment of threatened and endangered plants in weed biological control. *PeerJ Life and Environment*. In Press.
- Hinz, H.L., Cabrera Walsh, G., Paterson, I., Paynter, Q., **Schwarzländer, M.**, Smith, M. and Weyl, P. Available tools and processess to strengthen pre-release studies of weed biocontrol agents. *Biological Control*. Accepted.
- \*Milan, J., \*Rushton, J., **Schwarzländer, M.**, and West, N.M. A standard impact monitoring protocol (SIMP) for weeds in western USA grasslands. *Biological Control*. Accepted.
- Gaskin, J.F., \*Chapagain, N., **Schwarzländer, M.**, Tancos, M.A., and West, N.M. 2023. Genetic diversity and structure of *Crupina vulgaris* (common crupina): a noxious rangeland weed of the western United States. *NeoBoiota*. DOI:10.3897/neobiota.82.90229.
- \*Winston, R.L., **Schwarzländer, M**., Hinz, H.L., and Pratt P.D. 2023. Prioritizing weeds for biological control development in the western USA: adaptation of the Biological Control Target Selection system. *BioControl*. In Press.
- \*Panta, S., **Schwarzländer**, **M.**, Weyl, P., Hinz, H.L., Winston, R.L., Eigenbrode, S.D., Bacher, S., and Paynter, Q. 2023. Classical biological control of weeds: Traits of insect herbivores and target weeds associated with greater biological weed control establishment and impact. *BioControl*. In Press.
- \*Subedi, B., **Schwarzländer, M.**, Eigenbrode, S.D., Harmon, B.L., and Weyl, P. Understanding the host finding behavior of a biological weed control candidate specialist as a contribution to pre-release risk assessments. *Entomologica Experementalis et Applicata*. DOI: 10.1111/eea.13334.
- \*Panta, S., Weyl, P., Eigenbrode, S.D., Harmon, B.L. and Schwarzländer, M. 2021. Specialized soil types affect host acceptability and performance of weed biocontrol candidates: implications for host specificity assessments. *BioControl*. DOI:10.1007/s10526-021-10101-x
- \*Fung, J.M., Nepal, K.\*, Kafle, B.D.\*, Eigenbrode, S.D. and **Schwarzländer, M.** 2021. Locomotory responses to olfactory cues during host-finding can inform environmental safety assessments of biological weed control agents. *Entomologica Experementalis et Applicata*. DOI: 10.1111/eea.13069
- Hinz, H.L., \*Winston, R.L. and **Schwarzländer**, **M**. 2020. A global review of the effectiveness and environmental safety of classical weed biological control. *Current Opinion in Insect Science*. DOI 10.1016/j.cois.2019.11.006. OPEN ACCESS
- Hinz, H.L., Bourchier, R.S., Schaffner, U., **Schwarzländer, M.** and \*Weed, A. 2019. Comment on Havens and colleagues (2019). *Bioscience*. DOI 10.1093/biosci/biz110
- Rapo, C.B., Schaffner, U., Eigenbrode, S.D., Hinz, H.L., Price, W.J., Morra, M., Gaskin, J. and **Schwarzländer**, **M**. 2019. Feeding intensity of insect herbivores is associated more closely with key metabolite profiles than phylogenetic relatedness of their potential hosts. PeerJ DOI 10.7717/peerj.8203 OPEN ACCESS
- Hinz, H.L., \*Winston, R.L. and **Schwarzländer, M**. 2019. How safe is weed biological control? A global review of direct non-target attack. *Quarterly Review of Biology*. DOI 10.1086/702340
- \*Park, I., Eigenbrode, Schwarzländer, M., Hinz, H.L., Schaffner, U., and Eigenbrode, S.D. 2018. A simple

- approach to evaluate behavioral responses of insect herbivores to olfactory and visual cues simultaneously: the double stacked y-tube device and portable volatile collection system. *Arthropod-Plant Interactions*. DOI 10.1007/s11829-018-9663-4
- **Schwarzländer, M.**, Moran, V.C., Raghu, S. 2018. Perspectives on recent developments in the biological control of weeds: an ambivalent picture. *BioControl*. DOI 10.1007/s10526-018-9888-2 OPEN ACCESS
- **Schwarzländer, M.**, Hinz, H.L., \*Winston, R.L. 2018. Biological control of weeds: an analysis global summary of introductions, rates of establishment and estimates of success, worldwide. *BioControl*. DOI 10.1007/s10526-018-9890-8 OPEN ACCESS
- \*Park, I., Eigenbrode, S.D., Schaffner, U., Hinz, H.L., Cook, S.P., Harmon, B., and **Schwarzländer, M**. 2018. Examining olfactory and visual cues governing host-specificity of a weed biological control candidate species to refine pre-release risk assessment. *BioControl*. DOI 10.1007/s10526-018-9867-7
- Tosevski, I., Sing, S., De Clerck-Floate, R., McClay, A. Weaver, D., **Schwarzländer, M.**, Krstic, O., Jelena, J., Gassmann, A. 2018. Twenty-five years after: Post-introduction association of *Mecinus janthinus* s.l. with invasive host toadflaxes *Linaria vulgaris* and *L. dalmatica* in North America. *Annals of Applied Biology*. DOI 10.1111/aab.12430
- Gaskin, J.F., **Schwarzländer, M.**, \*Gibson, R., Simpson, H., Marshall, D.L., Gerber, E., Hinz, H.L. 2018. Geographic population structure in an outcrossing plant invasion after centuries of cultivation and recent founding events. *AoB Plants*. DOI 10.1093/aobpla/ply020
- \*Weed, A.S., **Schwarzländer, M.**, \*Milan, J. 2017. Update on citizen-based biological control monitoring of Dalmatian toadflax, *Linaria dalmatica* (Plantaginaceae) in Idaho, USA. *BioControl*. DOI 10.1007/s10526-017-9848-2
- Hinz, H.L., **Schwarzländer**, **M.**, Gassmann, A. and Bourchier, R.S. 2014. Successes we would not have had: a retrospective comparison of predicted versus realized host range of weed biological control agents in North America. <u>Invasive Plant Science and Management</u>. 7:565-579. **WSSA PRESS RELEASE PAPER OF THE YEAR**
- \*Weed, A.S. and **Schwarzländer, M.** 2014 Density-dependence, precipitation, and biological control agent herbivory influence landscape-scale dynamics of the invasive Eurasian plant *Linaria dalmatica*. Journal of Applied Ecology. 51: 825–834.
- Gaskin, J.F., **Schwarzländer, M.**, Hinz, H.L., Williams, L. III, Gerber, E., Rector, B.G. and Zhang, D.Y. 2013 Genetic identity and diversity of perennial pepperweed (*Lepidium latifolium*) in its native and invaded ranges. <u>Invasive Plant Science and Management</u>. 6(2):268-280. *PAPER OF THE YEAR AWARD*.
- Gaskin, J.F., **Schwarzländer, M.**, Kinter, C.L., Smith, J.F. and Novak, S.J. 2013 Propagule pressure, population structure and geographic origins of an apomictic plant invasion on three invaded continents; a comparison of introduction dynamics around the globe. <u>American Journal of Botany.</u> 100(9): 1871-1882.
- Goulet, E.J., Thaler, J., Ditommaso, A., **Schwarzländer, M.** and Shields, E.J. 2013 Impact of *Mecinus janthinus* (Coleoptera: Curculionidae) on the growth and reproduction of *Linaria dalmatica* (Scrophulariaceae). The Great Lakes Entomologist 46(1-2): 90-98.
- Gaskin, J.F., **Schwarzländer**, **M.**, Williams, L. III, Gerber, E. and Hinz, H.L. 2012. Minimal genetic diversity in the facultatively outcrossing perennial pepperweed (*Lepidium latifolium*) invasion. Biological Invasions 14:1797-1807.
- Hinz, H.L., **Schwarzländer, M.**, \*McKenney, J.L., \*Cripps, M.G., Harmon, B.L. and Price, W.J. 2012. Biogeographical comparison of *Lepidium draba* between its native, expanded and introduced range. Biological Invasions 14:1999-2016.
- \*Szűcs, M., Eigenbrode, S.D., **Schwarzländer, M.** and Schaffner, U. 2012. Hybrid vigor in the biological control agent, *Longitarsus jacobaeae*. Evolutionary Applications 5(8): 489-497.
- \*Szűcs, M., Urs Schaffner, Price, W.J. and **Schwarzländer, M.** 2012. Post-introduction evolution in the biological control agent *Longitarsus jacobaeae* (Coleoptera: Chrysomelidae). Evolutionary

- Applications 5(8): 858-868.
- \*Puliafico, K.P., **Schwarzländer**, **M.**, Price, W.J., Harmon, B.L. and Hinz, H.L. 2011. Native and Exotic Grass Competition with Invasive Hoary Cress (*Lepidium draba*). <u>Invasive Plant Science and Management</u> 4(1): 858-868.
- \*Szűcs, M., **Schwarzländer, M.** and Gaskin, J.F. 2011. Reevaluating establishment and potential hybridization of different biotypes of the biological control agent *Longitarsus jacobaeae* using molecular tools. Biological Control 58:44-52.
- Van Driesche, R.G, Carruthers, R., Center, T., R., Hoddle, M., Hough-Goldstein, J., Morin, L., Smith, L., Blossey, B., Brancatini, V., Casagrande, R, Causton, C., Coetzee, J. A., Cuda, J., Ding, J., Fowler, S., Frank, H., Fuester, Goolsby, J., Grodowitz, M., Heard, T. A., Hill, M. P., Hoffmann, J., Huber, J., Julien, M., Kario, M., Kenis, M., Medal, J., Messing, R., Miller, R., Moore, A., Neuenschwander, P., Newman, R., Norambuena, H., Palmer, W., Pemberton, R., Perez Panduro, A., Pratt, P., Ramini, S., Rayamajhi, M., Salom, S., Sands, D., Schooler, S., Sheppard, A., Shaw, R., Schwarzländer, M., Tipping, P., van Klinken, R. and Wagner, D. 2010. Classical Biological Control for the Protection of Native Ecosystems. Biological Control 54:S2-S33.
- \*Cripps, M.G., Hinz, H.L., \*McKenney, J.L., Price, W.J. and **Schwarzländer, M.** 2009. No evidence for an 'evolution of increased competitive ability' for the invasive *Lepidium draba*. Basic and Applied Ecology 10: 103-112.
- Newcombe, G., Shipunov, A., Eigenbrode, S.D., Raghavendra, A.K.H., Ding, H., Anderson, C.L., Menjivar, R., Crawford, R. and **Schwarzländer, M.** 2009. Endophytes influence protection and growth of an invasive plant. <u>Communicative and Integrative Biology</u> 2(1): 249-251.
- \*Andreas, J.E., DeClerck-Floate, R.A. and **Schwarzländer, M.** 2008. The occurrence and potential relevance of post-release nontarget attack by *Mogulones cruciger*, a biocontrol agent for *Cynoglossum officinale* in Canada. <u>Biological Control</u> 46(3): 309-311.
- Eigenbrode, S.D., \*Andreas, J.E., \*Cripps, M.C., Ding, H., Biggam, R.C. and **Schwarzländer, M.** 2008. Induced chemical defenses in invasive plants: a case study with *Cynoglossum officinale* L. <u>Biological</u> Invasions 10: 1373-1379.
- Lau, J.A., \*Puliafico, K.P., Kopshever, J.A., Steltzer, H., Jarvis, E.P., **Schwarzländer, M.**, Strauss, S.Y. and Hufbauer, R.A. 2008. Inference of allelopathy is complicated by effects of activated carbon on plant growth. New Phytologist 178(2): 412-423.
- \*Puliafico, K.P., **Schwarzländer, M.**, Harmon, B.L. and Hinz, H.L. 2008. Effect of generalist insect herbivores on *Lepidium draba* (Brassicaceae) implications for the enemy release hypothesis. <u>Journal</u> of Applied Entomology 132(7): 519-529.
- \*McKenney, J.L., \*Cripps, M.G., Price, W.J., Hinz, H.L. and **Schwarzländer, M.** 2007. No difference in competitive ability between invasive North American and native European *Lepidium draba* populations. Plant Ecology 193:293-303.
- \*Cripps, M.G., Hinz, H.L., \*McKenney, J.L., Harmon, B.L., Merickel, F.W. and **Schwarzländer, M.** 2006. Comparative survey of the phytophagous arthropod faunas associated with *Lepidium draba* in Europe and the western United States, and the potential for biological weed control. <u>Biocontrol Science and Technology</u> 16(10): 1007-1030.
- \*Cripps, M.G., \*McKenney, J.L., Hinz, H.L., Price, W.J. and **Schwarzländer, M.** 2006. Biogeographic comparison of the arthropod herbivore communities associated with *Lepidium draba* in its native, expanded and introduced ranges. Journal of Biogeography 33(12): 2107-2119.
- \*Häfliger, P., **Schwarzländer, M.** and Blossey, B. 2006. Impact of *Archanara geminipuncta* (Lepidoptera: Noctuidae) on above-ground biomass production of *Phragmites australis*. Biological Control 38(3): 413-421.
- \*Häfliger, P., **Schwarzländer, M.** and Blossey, B. 2006. A Comparison of Biology and Host Plant Utilization of *Archanara geminipuncta*, *A. dissoluta*, *A. neurica* and *Arenostola phragmitidis* (Lepidoptera: Noctuidae), Potential Biological Control Agents of *Phragmites australis* (Arundineae: Poaceae). Annals of the Entomological Society of America 99(4): 683 696.

- Kuhlmann, U., Mason, P.G., Hinz, H.L., Blossey, B., De Clerck-Floate, R.A., Dosdal, L.M., McCaffrey, J.P., Schwarzländer, M., Olfert, O., Brodeur, J., Gassmann, A., McClay, A.S. and Wiedenmann, R.N. 2006. Avoiding conflicts between insect and weed biological control: selection of non-target species to assess host specificity of cabbage seedpod weevil parasitoids. <u>Journal of Applied Entomology</u> 130(3): 129-141.
- \*Milan, J.D., Harmon, B.L., Prather, T.S. and **Schwarzländer, M.** 2006. Winter mortality of *Aceria chondrillae*, a biological control agent released to control rush skeletonweed (*Chondrilla juncea*) in the western United States. <u>Journal of Applied Entomology</u> 130(9-10): 473-479.
- \*Häfliger, P., **Schwarzländer, M.** and Blossey, B. 2005. Biology of *Platycephala planifrons* and its potential effectiveness as biological control agent for invasive *Phragmites australis* in North America. <u>Biological Control</u> 34(3): 302-311.
- Hinz, H.L. and **Schwarzländer, M.** 2004. Comparing invasive plants in their native and exotic range: What can we learn for biological control? Weed Technology 18(Suppl.): 1533-1541.
- DeClerck-Floate, R.A. and **Schwarzländer, M. 2002.** Host-specificity of *Mogulones cruciger* Hbst. (Coleoptera: Curculionidae), a biological control agent for houndstongue (*Cynoglossum officinale* L.) with emphasis on testing of native North American Boraginaceae. <u>Biocontrol Science and Technology 12</u>: 293-306.
- Tewksbury, L., Casagrande, R., Blossey, B., \*Häfliger, P. and **Schwarzländer, M.** 2002. Potential for Biological Control of *Phragmites australis* in North America. <u>Biological Control</u> 23: 191-212.
- **Schwarzländer, M.** 2000. Host-specificity of *Longitarsus quadriguttatus* Pont., a below-ground herbivore for the biological control of houndstongue. <u>Biological Control</u> 18: 18-26.
- **Schwarzländer, M.** and DeClerck-Floate, R.A. 1999. Host range determination of herbivore insects for classical biological of weeds: Ecological approaches to evaluate the risk to non-target plants. <u>IOBC/WPRS Bulletin</u> 22(2): 60.
- **Schwarzländer, M.** 1997. Bionomics of *Mogulones cruciger* (Coleoptera: Curculionidae), a below ground herbivore for the biological control of hound's-tongue. Environmental Entomology 26(2): 357-365.

# Peer Reviewed Book Chapters

- Weyl, P., Bouchier, R.S., Hinz, H.L., Littlefield, J.L., and Schwarzländer, M. 2023. *Lepidium draba* L., *L. chalepense* L., *L. appelianum* Al-Shehbaz, Hoary Cresses (Brassicaceae). In: 'Biological Control Programmes in Canada 2013-2022' (Eds: Veronique Martel and Meghan Vankosky). CABI Publishing, Wallingford, U.K.
- Hinz, H.L., Bouchier, R. and Schwarzländer, M. 2013. *Lepidium draba* L., *L. chalepense* L., *L. appelianum* Al-Shehbaz, Hoary Cresses (Brassicaceae). In: 'Biological Control Programmes in Canada 2001-2012' (Eds: Peter Mason and Dave Gillespie) Pp 322–337. CABI Publishing, Wallingford, U.K.
- Schwarzländer, M. and Hinz, H.L. 2004. Whitetop/Hoary cress *L. draba, L. appelianum*. pp. 452. In: Coombs, E.M., J.K. Clark, G.L. Piper, and A.F. Confrancesco Jr., Biological Control of Invasive Plants in the United States, Western Society of Weed Science, Oregon State University Press, Corvallis.
- Wilson, L.M. and Schwarzländer, M. 2004. Hawkweeds/*Hieracium* spp. p. 444. In: Coombs, E.M., J.K. Clark, G.L. Piper, and A.F. Confrancesco Jr., Biological Control of Invasive Plants in the United States, Western Society of Weed Science, Oregon State University Press, Corvallis.
- Wilson, L.M. and Schwarzländer, M. 2003. Biological Control of Weeds. In: 'Robert M. Goodman (ed.) Encyclopedia of Plant and Crop Science'. Marcel Dekker Inc., New York. 1300 pages.
- Blossey, B., Häfliger, P. and Schwarzländer, M. 2002. Common Reed, *Phragmites australis* (Cav.) Trin. ex Steudel. pp.131-138. In: 'Biocontrol of weeds in the East' (Roy van Driesche, Mark Hoddle, and Bernd Blossey, eds.) USFS Forest Health technology Enterprise Team, Arlington, VA.
- DeClerck-Floate, R.A. and Schwarzländer, M. 2002. Cynoglossum officinale (L.), Houndstongue

(Boraginaceae). pp. 337-343. In: 'Biological Control Programmes in Canada, 1981-2000' (P.G. Mason and J.T. Huber, eds.) CABI Publishing, Wallingford, UK.

## Peer Reviewed/Refereed Proceedings

- Andreas, J.E., Schwarzländer, M., Ding, H. and Eigenbrode, S.D. 2008. Post-release nontarget monitoring of *Mogulones cruciger*, a biocontrol agent released to control *Cynoglossum officinale* in Canada. pp. 75-82. In: Julien, M.H., Sforza, R., Bon, M.C., Evans, H.C, Hatcher, P.E., Hinz, H.L. and Rector, B.G. (eds.), Proceedings of the XII International Symposium on the Biological Control of Weeds. 22-27 April, 2007. CSIRO & USDA ARS. La Grande Motte, France.
- Hinz, H.L., Schwarzländer, M. and Gaskin, J.F. 2008. Does phylogeny explain the host choice behaviour of potential biological control agents for Brassicaceae weeds? pp. 410-417. In: Julien, M.H., Sforza, R., Bon, M.C., Evans, H.C, Hatcher, P.E., Hinz, H.L. and Rector, B.G. (eds.), Proceedings of the XII International Symposium on the Biological Control of Weeds. 22-27 April, 2007. CSIRO & USDA ARS. La Grande Motte, France.
- Hinz, H.L., Gerber, E., Cristofaro, M., Tronci, C., Seier, M.K., Korotyaev, B.A., Gültekin, L., Williams, L. and Schwarzländer, M. 2008. All against one: first results of a newly formed foreign exploration consortium for the biological control of perennial pepperweed. In: Julien, M.H., Sforza, R., Bon, M.C., Evans, H.C, Hatcher, P.E., Hinz, H.L. and Rector, B.G. (eds.), Proceedings of the XII International Symposium on the Biological Control of Weeds. 22-27 April, 2007. CSIRO & USDA ARS. La Grande Motte, France.
- Puliafico, K.P., Schwarzländer, M., Hinz, H.L. and Harmon, B.L. 2008. The use of surrogate herbivores for the pre-release efficacy screening of biological control agents of *Lepidium draba*. pp. 429-434. In: Julien, M.H., Sforza, R., Bon, M.C., Evans, H.C, Hatcher, P.E., Hinz, H.L. and Rector, B.G. (eds.), Proceedings of the XII International Symposium on the Biological Control of Weeds. 22-27 April, 2007. CSIRO & USDA ARS. La Grande Motte, France.
- Szűcs, M., Anderson, C.L. and Schwarzländer, M. 2008. Landscape genetics and climatic associations of flea beetle lineages, and implications for biocontrol of tansy ragwort. pp. 443-447. In: Julien, M.H., Sforza, R., Bon, M.C., Evans, H.C, Hatcher, P.E., Hinz, H.L. and Rector, B.G. (eds.), Proceedings of the XII International Symposium on the Biological Control of Weeds. 22-27 April, 2007. CSIRO & USDA ARS. La Grande Motte, France
- Schwarzländer, M. and Häfliger, P. 2000. Shoot flies, and Shoot and Rhizome Mining Moth Species Associated with Common Reed (*Phragmites australis*) in Europe: Can These Insect Herbivores Successfully Control the Wetland Weed in North America? pp. 397-420. In: 'Spencer, N.R. (ed.)', Proceedings of the X International Symposium on Biological Control of Weeds. 4-14 July 1999. Montana State University, Bozeman, MT, USA.
- Schwarzländer, M., Hinz, H.L., and Wittenberg, R. 1996. Oogenesis requirements and weed biocontrol: an essential part in host-range evaluation of insect agents or just wasted time? pp. 79-85. In: Moran, V. C. and Hoffmann, J. H. (eds.), 'Proceeding of the IX International Symposium on Biological Control of Weeds'. Stellenbosch, University of Cape Town,

# **Professional Meeting Papers:**

# International:

- Panta, S., Winston, R.L., Schwarzländer, M. Hinz, H.L., Weyl, P. Classical biological control of weeds: Traits of agents and target weeds associated with agent establishment and control success. XXVI International Congress of Entomology, July 17-22, 2022, Helsinki, Finland.
- Hinz, H.L., Panta, S., Schwarzländer, M., Winston, R.L. What makes a good classical weed biological control agent? XXVI International Congress of Entomology, July 17-22, 2022, Helsinki, Finland.
- Nepal, K., Schwarzländer, M., Eigenbrode, S. The role of visual and olfactory cues in the host recognition

- process of Mogulones crucifer, a biocontrol agent of *Cynoglossum officinale*. Joint ESA, ESC, and ESBC Annual Meeting November 13-16, 2022.
- Schwarzländer, M. After 32 years in the making, *Mogulones crucifer* may become a biological control agent for houndstongue in Canada *and* the United States. North American Invasive Species Management Association. ONLINE, 2 December 2021.
- Schwarzländer, M., Hinz, H.L., Winston, R.L., Day, M. and Panta, S. Biological control of weeds: a summary of introduction, rates of establishment and estimates of success. XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Gaskin, J.F., Schwarzländer, M., Gibson, R., Simpson, H., Marshall, D., Gerber, E., Hinz, H.L. Geographic population structure in an outcrossing plant invasion after centuries of cultivation and recent founding events. XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Park, I., Schwarzländer, M., Eigenbrode, S.D., Cook, S., Hinz, H.L. and Schaffner, U. Integrating sensory ecology to complement pre-release risk assessments for biological control candidates. XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Milan, M. and Schwarzländer, M. A post-release assessment tool and its implementation in the USA. XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Volkovitsh, M., Dolgovskaya, M., Cristofaro, M., Marini, F., Augé, M., Littlefield, J., Schwarzländer, M., Kalashian, M., and Jashenko, R. Preliminary studies on *Oporopsamma wertheimsteini* and *Sphenoptera foveloa*, two potential biological control agents of *Chondrilla juncea*. XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Fung, J.M., Nepal, K., Schaffer, U., Eigenbrode, S.D., Harmon, B. Schwarzländer, M. A weevil's choice how accurately do pre-release behavioral bioassays predict post-release host selection? XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Subedi, B., Eigenbrode, S.D., Harmon, B.L., Hinz, H.L., Weyl, P., and Schwarzländer, M. Examining prealignment host-selection of potential biological control agent of dyer's woad to cues of non-target confamilial plants. XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Panta, S., Weyl, P., Hinz, H.L., Harmon, B.L., and Schwarzländer, M. A novel approach to host-specificity testing for non-target plant species restricted to highly specialized soil types. XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Price, J., Weed, A.S., Milan, J., and Schwarzländer, M. Post-release assessment of classical biological control of *Cirsium arvense* in the western United States. XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Pandey, A., Schwarzländer, M., Milan, J. and Weed, A.S. Analyses of citizen-based monitoring of spotted knapweed biological control over nine years in Idaho, USA. XV International Symposium on Biological Control of Weeds, August 26-31, 2018, Engelberg, Switzerland.
- Fung, J.M, Nepal, K., Schaffner, U., Eigenbrode, S.D. and Schwarzländer, M. How accurate are laboratory bioassays in predicting post-release host selection behavior? Weevil find out! ESA, ESC, and ESBC Joint Annual Meeting, November 11-14, 2018, Vancouver, Canada.
- Panta, S., Schwarzländer, M., Weyl, P., Harmon, B.L., and Hinz, H.L. A novel approach to weed biological control host-specificity testing for non-target plant species restricted to highly specialized soil types. ESA, ESC, and ESBC Joint Annual Meeting, November 11-14, 2018, Vancouver, Canada.
- Nepal, K., Fung, J.M., Eigenbrode, S.D., Schaffner, U., and Schwarzländer, M. Mogulones crucifer, a biological control for the rangeland weed Cynoglossum officinale, is repelled by volatilies of closely related congeners of its host plant. ESA, ESC, and ESBC Joint Annual Meeting, November 11-14, 2018, Vancouver, Canada. 1st Place, M.S. Student Competition.

- Subedi, B., Schwarzländer, M., and Eigenbrode, S.D. Examining pre-alightment host-selection of a biological control candidate for *Isatis tinctorial* in response to olfactory and visual cues of non-target confamilial plants. ESA, ESC, and ESBC Joint Annual Meeting, November 11-14, 2018, Vancouver, Canada. 1st Place, M.S. Student Competition.
- Pandey, A., Schwarzländer, M., Milan, J., and Weed, A.S. Analysis of nine years of citizen-based biological control monitoring of spotted knapweed, *Centaurea stoebe*, subsp. *Micranthos* (Asteraceae), in Idaho. ESA, ESC, and ESBC Joint Annual Meeting, November 11-14, 2018, Vancouver, Canada.
- Schwarzländer, M. Innovative biological control of weed programming in the State of Idaho. NZ US Invasive Species Workshop, August 26 Spetember 1, 2017, Auckland, NZ (Invited).
- Schwarzländer, M. Progress in the Biological Control of Weeds; Bimodal host-finding studies improve environmental safety assessments of a weed biocontrol candidate, the weevil *Mogulones borraginis* on *Cynoglossum officinale*. USDA Interagency Research Forum on Invasive Species, January 11-13, 2017, Annapolis, MD (Invited).
- Hinz, H.L, Winston, R.L. and Schwarzländer, M.. How safe is weed biocontrol? A global review of non-target attack. XXV International Congress of Entomology, September 25-30, 2016, Orlando, FL.
- Schwarzländer, M., and Weed, A.S. Simple citizen science monitoring programs generate a wealth of data to assess weed biocontrol effects. XXV International Congress of Entomology, September 25-30, 2016, Orlando, FL.
- Park, I., Schaffner, U., Eigenbrode, S.D., Hinz, H.L. and Schwarzländer, M. Bimodal host-finding studies improve environmental safety assessments of a weed biocontrol candidate, the weevil *Mogulones* borraginis on Cynoglossum officinale. XXV International Congress of Entomology, September 25-30, 2016, Orlando, FL.
- Kafle, B., Eigenbrode, S.D. and Schwarzländer, M. Incorporating olfactory cues into risk assessments of the root weevil *Mogulones crucifer* a biocontrol agent of *Cynoglossum officinale*. XXV International Congress of Entomology, September 25-30, 2016, Orlando, FL.
- Rendon, J., Eigenbrode, S.D., Hinz, H.L., Schaffner, U. and Schwarzländer, M. Role of chemical, visual and tactile cues in the host selection behavior of the weevil *Ceutorhynchus cradariae*, a potential biological control agent for *Lepidium draba*. XXV International Congress of Entomology, September 25-30, 2016, Orlando, FL.
- Rendon, J. and Schwarzländer, M., Eigenbrode, S.E., Hinz, H.L. and Schaffner, U. Role of chemical, visual, and tactile cues in the host-selection behavior of the weevil, *Ceutorhynchus cardariae*, a potential biological control agent for *Lepidium draba*. XIV International Symposium on Biological Control of Weeds. March 2-7, 2014, Kruger National Park, South Africa.
- Hinz, H.L., Schwarzländer, M. and Winston, R.L. How safe are weed biological control agents? A worldwide reveiw of non-target attack. XIV International Symposium on Biological Control of Weeds. March 2-7, 2014, Kruger National Park, South Africa.
- Park, I. and Schwarzländer, M., Eigenbrode, S.E., Hinz, H.L. and Schaffner, U. Bringing biological cues from the field into the laboratory: integration of multimodal cues to assess the environmental safety of the weevil *Mogulones borraginis*. XIV International Symposium on Biological Control of Weeds. March 2-7, 2014, Kruger National Park, South Africa. 1st Place, Ph.D. Student Competition.
- Milan, J., Schwarzländer, M. Brusven, P. and Randall, C.B. Post-release monitoring: a regional approach to assesses impact across the invaded ranges of multiple-target species. XIV International Symposium on Biological Control of Weeds. March 2-7, 2014, Kruger National Park, South Africa.
- Schwarzländer, M., Winston, R.L., Hinz, H.L. and Bargeron, C. The new online version of "Biological Control of Weeds A World Catalogue of Agents and Their Target Weeds." XIV International Symposium on Biological Control of Weeds. March 2-7, 2014, Krugar National Park, South Africa.
- Gaskin, J.F., Schwarzländer, M., Kinter, C.L., Novak, S. Smith, J. and Markin, G.P. Genetic diversity and distribution of rush skeletonweed (*Chondrilla juncea L.*; Asteraceae) in its native range and on three invaded continents. 13<sup>th</sup> International Symposium on Biological Control of Weeds. September 11 16, 2011. Waikoloa Beach, HI.

- Gibson, R., Hinz, H.L. and Schwarzländer, M. Comparing the population biology of *Isatis tinctoria* in its native Eurasian and introduced N. American range under different experimental treatments. 13<sup>th</sup> International Symposium on Biological Control of Weeds. September 11 16, 2011. Waikoloa Beach, HI.
- Hinz, H.L., Gassmann, A., Bourchier, R. and Schwarzländer, M. Successes we might never have had: a retrospective comparison of predicted versus realized host range of established weed biological control agents in North America. 13<sup>th</sup> International Symposium on Biological Control of Weeds. September 11 16, 2011. Waikoloa Beach, HI.
- Milan, J.D., Weed, A.S., Schwarzländer, M., Brusven, P., and Randall, C.B. Is a regional interagency, multi-year, multi-system post-release impact assessment program possible? 13<sup>th</sup> International Symposium on Biological Control of Weeds. September 11 16, 2011. Waikoloa Beach, HI.
- Park, I., Schwarzländer, M. and Eigenbrode, S.D. The use of chemical ecology to improve pre-release and post-release host range assessments for potential and released biological control agents of *Cynoglossum officinale*. 13<sup>th</sup> International Symposium on Biological Control of Weeds. September 11 16, 2011. Waikoloa Beach, HI.
- Rapo, C., Eigenbrode, S.D., Hinz, H.L., Gaskin, J.F., Price, W.J., Schaffner, U. and Schwarzländer, M. Metabolic profiling: a new tool in the prediction of host-specificity in biological control of weeds. 13<sup>th</sup> International Symposium on Biological Control of Weeds. September 11 16, 2011. Waikoloa Beach, HI.
- Schwarzländer, M., Winston, R.L. and Weed, A.S. Spatial monitoring of the dispersal target and non-target impact of the unintentionally introduced biological control agent *Mogulones crucifer* in the northwestern USA. 13<sup>th</sup> International Symposium on Biological Control of Weeds. September 11 16, 2011. Waikoloa Beach, HI.
- Szűcs, M., Schaffner, U. and Schwarzländer, M. Post-Introduction Evolution in the biological control agent *Longitarsus jacobaeae*. 13<sup>th</sup> International Symposium on Biological Control of Weeds. September 11 16, 2011. Waikoloa Beach, HI.
- Weed, A.S. and Schwarzländer, M. Local spatial structure of Dalmatian toadflax (*Linara dalmatica*) and its effect on attack by the stem-mining weevil *Mecinus janthinus* in the northwestern U.S. 13<sup>th</sup> International Symposium on Biological Control of Weeds. September 11 16, 2011. Waikoloa Beach, HI.
- Rapo, C., Eigenbrode, S.D., Gaskin, J.F., Hinz, H.L., Schwarzländer, M. and Schaffner, U. New tools to predict the host range of potential biocontrol agents of hoary cress. International Conference on Biocontrol for Nature 2010. 7 October 2010. Morgantown, WV.
- Schwarzländer, M. Classical biological weed control in North America: Successes and post-release monitoring. 100 Years CABI Centennial Celebration Symposium. 8 December 2010. Delémont, Switzerland.
- Andreas, J.E., Schwarzländer, M., Ding, H. and Eigenbrode, S.D. Post-release nontarget monitoring of *Mogulones cruciger*, a biocontrol agent released to control *Cynoglossum officinale* in Canada. XIIth International Symposium on the Biological Control of Weeds. 22-27 April, 2007. La Grande Motte, France.
- Hinz, H.L., Gerber, E., Cristofaro, M., Tronci, C., Seier, M., Korotyaev, B., Gültekin, L., Williams, L. and Schwarzländer, M. All against one: first results of a newly formed foreign exploration consortium for the biological control of perennial pepperweed. XIIth International Symposium on the Biological Control of Weeds. 22-27 April, 2007. La Grande Motte, France.
- Hinz, H.L., Schwarzländer, M. and Gaskin, J.F. Does phylogeny explain the host choice behaviour of potential biological control agents for Brassicaceae weeds? XIIth International Symposium on the Biological Control of Weeds. 22-27 April, 2007. La Grande Motte, France.
- Puliafico, K.P., Schwarzländer, M., Hinz, H.L. and Harmon, B.L. The use of surrogate herbivores for the pre-release efficacy screening of biological control agents of *Lepidium draba*. XII International Symposium on the Biological Control of Weeds. 22-27 April 2007. La Grande Motte, France.

- Szűcs, M., Anderson, C.L. and Schwarzländer, M. Landscape genetics and climatic associations of flea beetle lineages, and implications for biocontrol of tansy ragwort. XIIth International Symposium on the Biological Control of Weeds. 22-27 April, 2007. La Grande Motte, France.
- Winston, R.L. and Schwarzländer, M. Are seed-feeding insects adequately controlling yellow starthistle, *Centaurea solstitialis*, in the western U.S.? XIIth International Symposium on the Biological Control of Weeds. 22-27 April, 2007. La Grande Motte, France.
- Hinz, H.L. and Schwarzländer, M. Comparing invasive plants in their native and exotic range: what can we learn for biocontrol? Annual Meeting of the British Ecological Society. 7-9 September 2004. Lancaster, UK.
- Cripps, M.G., Schwarzländer, M., McKenney, J.L. and Hinz, H.L. Niche occupation on *Lepidium draba* L. in its native and introduced ranges. Annual Meeting of the Entomological Society of Canada. 15-19 October 2004. Charlottetown, Prince Edward Island.
- Hinz, H.L. and Schwarzländer, M. What can we learn for biological control from transatlantic comparisons of invasive plant species ecology? 7<sup>th</sup> International Conference on the Ecology and Management of Alien Plant Invasions. 3-7 November 2003. Ft. Lauderdale, FL.
- Schwarzländer, M. Initiation of a consortium for the biological control of hoary cress (HCC). II International Knapweed Symposium. 16–17 March 2001. Coeur d'Alene, ID.
- Andreas, J.E. and Schwarzländer, M. Complementary studies on the host-specificity of *Longitarsus* quadriguttatus Pont., a below-ground herbivore for the biological control of the rangeland weed *Cynoglossum officinale* L. Joined Annual Meeting of the Entomological Societies of America and Canada. 8-12 December 2000. Montréal, Quebec, Canada.

### National:

- Schwarzländer, M. A new hope Biological control of houndstongue may finally come to the United States. Joint 3<sup>rd.</sup> Innovations in Invasive Species Management (IISM) and 5<sup>th.</sup>Northern Rockies Invasive Plant Council (NRIPC) Conference, December 10-12, 2019, Coeur d'Alene, Idaho.
- Subedi, B., Schwarzländer, M., Weyl, P., Eigenbrode, S.D. and Harmon, B.L. Examining pre-alightment host-selection of a biological control candidate Ceutorhynchus rusticus for Isatis tinctoria in response to olfactory and visual cues of nontarget confamilial plants. Joint 3<sup>rd.</sup> Innovations in Invasive Species Management (IISM) and 5<sup>th.</sup>Northern Rockies Invasive Plant Council (NRIPC) Conference, December 10-12, 2019, Coeur d'Alene, Idaho.
- Panta, S., Schwarzländer, M., Weyl, P., Eigenbrode, S.D., Hinz, H.L. and Harmon, B.L. A novel approach to host-specificity testing in weed biological control for non-target species restricted to highly specialized soil types. Joint 3<sup>rd.</sup> Innovations in Invasive Species Management (IISM) and 5<sup>th.</sup>Northern Rockies Invasive Plant Council (NRIPC) Conference, December 10-12, 2019, Coeur d'Alene, Idaho.
- Fung, J., Schwarzländer, M., Schaffner, U., Nepal, K., and Sanford D. Eigenbrode. How host finding locomotory behavior can inform host selection predictions in weed biological control.Entomological Society of America, Annual Meeting, November 17-20, 2019, St. Louis, Missouri.
- Panta, S., Weyl, P., Eigenbrode, S.D., Hinz, H.L., Harmon, B.L. and Schwarzländer, M. Serpentinic soil affects herbivore performance. Entomological Society of America, Annual Meeting, November 17-20, 2019, St. Louis, Missouri.
- Subedi, B., Weyl, P., Hinz, HL., Eigenbrode, SD., Harmon, BL. and Schwarzländer, M. Olfactory and visual cues determine pre-alightment host selection of a biological control candidate. Entomological Society of America, Annual Meeting, November 17-20, 2019, St. Louis, Missouri.
- Schwarzländer, M. Role of overseas research collaborators in developing successful petitions for biological weed control in the United States. Entomological Society of America, Annual Meeting, November 17-20, 2019, St. Louis, Missouri.
- Park, I., Schwarzländer, M. and Eigenbrode, S.D. The effects of plant volatile organic compounds and conspecific body odors on the host location of the seed feeding weevil, *Mogulones borraginis*. The

- 62<sup>nd</sup> Annual Meeting of the Entomological Society of America. November 16-19, 2014, Portland, Oregon.
- Park, I. Schwarzländer, M. and Eigenbrode, S.D. The potential roles of conspecific body odors and plan volatiles in umated *Mogulones borraginis* (Coleoptera: Curculionidae). The 62<sup>nd</sup> Annual Meeting of the Entomological Society of America. November 16-19, 2014, Portland, Oregon.
- Park, I., Schwarzländer, M. and Eigenbrode, S.D. Cross-modal repellency to assess the environmental safety of *Mogulones borraginis* L. The 61st Annual Meeting of the Entomological Society of America. November 10-13, 2013, Austin, TX.
- Park, I., Schwarzländer, M. and Eigenbrode, S.D. The effect of olfactory and visual cues on the host selection of the seed-feeding weevil, *Mogulones borraginis*. The 61st Annual Meeting of the Entomological Society of America. November 10-13, 2013, Austin, TX.
- Inskeep, J., Weed, A.S, Schwarzländer, M., Harmon, B.L. and Scott, T. Explaining spatio-temporal patterns of impact to Dalmatian toadflax by the stem-mining weevil *Mecinus janthiniformis*: Effects of host quality and attack intensity on weevil population growth. The 60th Annual Meeting of the Entomological Society of America. November 11-14, 2012, Knoxville, TN. First Place Poster Presentation Plant Insect Ecosystems Undergraduate Students.
- Park, I., Schwarzländer, M. and Eigenbrode, S.D. Assessing the importance of flowers and their scents in the host selection of the seed-feeding weevil (*Mogulones borraginis*). The 60th Annual Meeting of the Entomological Society of America. November 11-14, 2012, Knoxville, TN.
- Park, I., Schwarzländer, M. and Eigenbrode, S.D. New tools to improve pre-release host range prediction of *Mogulones borraginis*, a biocontrol agent for houndstongue. The 60th Annual Meeting of the Entomological Society of America. November 11-14, 2012, Knoxville, TN. *Oral Presentation*.
- Price, J., Schwarzländer, M. and Harmon, B.L. Post-release assessment of the efficacy of *Urophora cardui* and *Hadroplontus litura*, biological control agents of Canada thistle. The 60th Annual Meeting of the Entomological Society of America. November 11-14, 2012, Knoxville, TN. *Display Presentation*.
- Rapo, C., Hinz, H.L., Eigenbrode, S.D., Gaskin, J.F., Schaffner, U., Price, W.J. and Schwarzländer, M. Metabolic profiling: a new tool in the prediction of hostspecificity in classical biological control of weeds? The 59th Annual Meeting Entomological Society of America November 13-16, 2011, Reno, NV
- Rendon, J., Schwarzländer, M. and Eigenbrode, S.D. The role of chemical, visual, and tactile cues in the host selection behavior of *Ceutorhynchus cardariae*, a potential biological control agent for *Lepidium draba*. The 60th Annual Meeting of the Entomological Society of America. November 11-14, 2012, Knoxville, TN. *Display Presentation*.
- Scott, T., Weed, A.S., Schwarzländer, M., Harmon, B.L. and Inskeep, J. Interactive effects of (*Mecinus janthiniformis*) herbivory and varying soil resource conditions on the performance of Dalmatian toadflax, (*Linaria dalmatica*). The 60th Annual Meeting of the Entomological Society of America.
   November 11-14, 2012, Knoxville, TN. . Second Place Poster Presentation Plant Insect Ecosystems Undergraduate Students.
- Hinz, H.L., Gassmann, A., Bourchier, R. and Schwarzländer, M. Successes we might never have had: a retrospective comparison of predicted versus realized host range of established weed biological control agents in North America. 38th Natural Areas Conference. 1-4 Nov. 2011 in Tallahassee, FL.
- Park, I., Schwarzländer, M. and Eigenbrode, S.D. Assessing olfactory and visual cues in host selection behavior to improve pre-release host range prediction of *Mogulones borraginis* (Coleoptera: Curculionidae) for h oundstongue, *Cynoglossum officinale* (Boraginaceae). The 59th Annual Meeting Entomological Society of America. November 13-16, 2011, Reno, Nevada.
- Szűcs, M., Schaffner, U. and Schwarzländer, M. Post-introduction life-history evolution in the weed biological control agent *Longitarsus jacobaeae*. The 59th Annual Meeting Entomological Society of America. November 13-16, 2011, Reno, Nevada.
- Weed, A.S. and Schwarzländer, M. Spatial dynamics of Dalmatian toadflax (*Linaria dalmatica*) and attack

- by the stem-mining weevil *Mecinus janthinus*. The 59th Annual Meeting Entomological Society of America. November 13-16, 2011, Reno, Nevada.
- Schwarzländer, M. Direct and indirect non-target effects in biological weed control programs in North America. 35<sup>th</sup> Natural Areas Conference. 14-17 October 2008. Nashville, TN.
- Schwarzländer, M. Biological control of Weeds Technology Transfer Workshops and collaborative tribal research projects. USDI BIA National Range Resource Manager Council Meeting. 29-31 Januray 2007. Phoenix, AZ.
- Schwarzländer, M. Basic principles of biological weed control Track 1. 1st National Tribal Invasive Species Conference. 6-9 November 2006. Reno, NV.
- Schwarzländer, M. Biological weed control agents for target weeds Track 2. 1st National Tribal Invasive Species Conference. 6-9 November 2006. Reno, NV.
- Schwarzländer, M. Implementation of a biological weed control program Track 3. 1st National Tribal Invasive Species Conference. 6-9 November 2006. Reno, NV.
- Schwarzländer, M. Monitoring and evaluation of biological weed control programs Track 4. 1st National Tribal Invasive Species Conference. 6-9 November 2006. Reno, NV.
- Barahona Ferman, M.A. and Schwarzländer, M. Impact of the stem-mining weevil *Mecinus janthinus* on Dalmatian toadflax populations in Idaho. Annual Meeting of the Entomological Society of America. 6-9 November 2005. Ft. Lauderdale, FL. *Display Presentation*. 1st Prize in Section, President's Prize.
- Puliafico, K.P., Harmon, B.L, Hinz, H.L. and Schwarzländer, M. Impact of North American insect herbivores on the invasive plant *Lepidium draba*. Annual Meeting of the Entomological Society of America. 6-9 November 2005. Ft. Lauderdale, FL. *Display Presentation*. 1st Prize in Section, President's Prize.
- Andreas, J.E. and Schwarzländer, M. Seven years after its release in Canada: Is it safe to introduce the houndstongue root weevil, *Mogulones cruciger*, in the United States? Annual Meeting of the Entomological Society of America. 14-17 November 2004. Salt Lake City, UT.
- Cripps, M.G., McKenney, J.L., Hinz, H.L. and Schwarzländer, M. Comparative analysis of the insect community structure on *Lepidium draba* in its indigenous range and introduced ranges. Annual Meeting of the Entomological Society of America. 14-17 November 2004. Salt Lake City, UT. *Display Presentation*. 1st Prize in Section, President's Prize.
- Eigenbrode, S.D., Andreas, J.E., Ding, H. and Schwarzländer, M. Comparison of pyrrolizidine alkaloid induction in European and North American populations of houndstongue. Annual Meeting of the Entomological Society of America. 14-17 November 2004. Salt Lake City, UT.
- Hinz, H.L. and Schwarzländer, M. Challenges and prospects for the biological control of invasive Brassicaceae in North America. Annual Meeting of the Entomological Society of America. 14-17 November 2004. Salt Lake City, UT.
- McKenney, J.L., Cripps, M.G., Hinz, H.L. and Schwarzländer, M. Endophagous herbivory and growth of the invasive mustard *Lepidium draba* in its native Eurasian range and introduced North American range. Annual Meeting of the Entomological Society of America. 14-17 November 2004. Salt Lake City, UT.
- Schwarzländer, M., McKenney, J.L., Cripps, M.G., Puliafico, K.P. and Hinz, H.L. Vigor and competitiveness of native and invasive hoary cress populations with regard to the evolution of increased competitive ability. Annual Meeting of the Entomological Society of America. 14-17 November 2004. Salt Lake City, UT.
- Schwarzländer, M. The environmental safety of the houndstongue root weevil. Annual Meeting of the Technical Advisory Group TAG. 9-11 September 2003. Spokane, WA.
- Schwarzländer, M. Environmental safety and pre-release host-specificity assessment of *Mogulones* cruciger Hbst., a below-ground herbivore for the biological control of houndstongue. Annual Meeting of the Entomological Society of America, Fort Lauderdale, FL. 17-21 November 2002.

- Schwarzländer, M. and Wilson, L.M. Biological control of invasive plant species programs. Weed Science Society of America. 1st Invasive Plant Species Workshop. 13-14 February 2002. Reno, NV.
- Andreas, J.E., Schwarzländer, M. and Hinz, H.L. Choice and no-choice open-field tests to assess the host-specificity of *Longitarsus quadriguttatus* Pont., a below-ground herbivore for the biological control of the rangeland weed houndstongue. Annual Meeting of the Entomological Society of America. 9-12 December 2001. San Diego, CA.
- Schwarzländer, M., Andreas, J.E., DeClerck-Floate, R.A. and Hinz, H.L. Host-specificity of *Mogulones borraginis*, a seed-feeding weevil for the biological control of houndstongue. Annual Meeting of the Entomological Society of America. 9-12 December 2001. San Diego, CA.
- Schwarzländer, M. Effect of below-ground herbivory on the reproductive timing in the monocarpic short-lived perennial *Cynoglossum officinale*. Annual Meeting of the Entomological Society of America. 9-12 December 2001. San Diego, CA.

# Regional:

- Aryal, S., **Schwarzländer**, **M**, Harman, B., and Eigenbrode S.D. Abundance of differently managed root-feeding biocontrol agents of spotted knapweed in Idaho. Pacific Branch Entomological Society of America Annual Meeting, 2-5 April 2023, Seattle, WA.
- Nepal, K., **Schwarzländer, M,** Harmon, B., and Eigenbrode S.D. The importance of visual and olfactory plant cues in the pre-contact host selection of *Mogulones crucifer*, a biological control agent for the invasive weed *Cynoglossum officinale*. Pacific Branch Entomological Society of America Annual Meeting, 2-5 April 2023, Seattle, WA.
- Rushton, J., **Schwarzländer**, **M**, Milan, J., and Eigenbrode S.D. Climate influences the *Mecinus janthiniformis Linaria dalmatica* biological weed control system in Idaho. Pacific Branch Entomological Society of America Annual Meeting, 2-5 April 2023, Seattle, WA.
- Thapa, A., **Schwarzländer, M,** Harmon, B., and Eigenbrode S.D. Which host plant cues does an inflorescence-feeding biological weed control candidate prefer during pre-contact host finding? Pacific Branch Entomological Society of America Annual Meeting, 2-5 April 2023, Seattle, WA.
- **Schwarzländer, M.** and Rushton, J. Analyzing 15 years of *Linaria dalmatica* SIMP post-release biocontrol data in Idaho. W5185 Annual Meeting, 23-25 October, 2023. McCall, ID (36 participants)
- Aryal, S. and **Schwarzländer, M.** Abundance of differently managed root-feeding biocontrol agents of spotted knapweed in Idaho. W5185 Annual Meeting, 23-25 October, 2023. McCall, ID (41 participants)
- Thapa, A. and **Schwarzländer**, **M.** Host recognition behavior of two sibling biocontrol candidate weevils, *Mogulones borraginis* and *M. crucifer*, to cues of their shared host plant *Cynoglossum officinale*. W5185 Annual Meeting, 23-25 October, 2023. McCall, ID (40 participants).
- Nepal, K. and **Schwarzländer, M.** The role of visual cues in the host recognition of *M. crucifer*, a biocontrol agent for houndstongue. W5185 Annual Meeting, 23-25 October, 2023. McCall, ID (40 participants).
- Aryal, S., Schwarzländer, M., Eigenbrode, S.E., Harmon, B. Abundance of two unevenly managed root-boring biological control agents for spotted knapweed in Idaho rangeland. Entomological Society of America Pacific Branch Meeting, Santa Rosa, California. April 10-13, 2022.
- Schwarzländer, M., Nepal, K., Thapa, A., Fung, J.M., Park, I., Inclusion of chemical ecology in environmental safety assessments of biological weed control candidates: How meaningful are the data? Entomological Society of America Pacific Branch Meeting, Santa Rosa, California. April 10-13, 2022.
- Schwarzländer, M. Update on weed biological control research and new agents. Oregon Interagency Noxious Weed Symposium. Corvallis, Oregon. December 6-8, 2022.
- Aryal, S., Eigenbrode, S.D., Weyl, P. and Schwarzländer, M. Abundance of two unevenly managed root-boring biological control agents for spotted knapweed in Idaho rangeland. Pacific Branch

- Entomological Society of America. ONLINE, April 2-5, 2021. First Place M.S. Student Competition Display.
- Panta, S., Weyl, P., Eigenbrode, S.D., Harmon, B.L. and Schwarzländer, M. Specialized soil types affect host acceptability and performance of weed biocontrol candidates: implications for host specificity assessments. Pacific Branch Entomological Society of America. ONLINE, April 2-5, 2021. **Second Place M.S. Student Competition Display.**
- Subedi, B., Harmon, B.L., Eigenbrode, S.D., Weyl, P. and Schwarzländer, M. Examining pre-alightment host selection of a weed biological control agent candidate to facilitate pre-release environmental safety assessment. Pacific Branch Entomological Society of America. ONLINE, April 2-5, 2021. Third Place M.S. Student Competition Display.
- Nepal, K., Harmon, B.L., Eigenbrode, S.D. and Schwarzländer, M. Role of host and non host plant volatile cues in host recognition and environmental safety assessments of the weevil *Mogulones crucifer*, a biocontrol agent of the invasive plant *Cynoglossum officinale*. Pacific Branch Entomological Society of America. ONLINE, April 2-5, 2021. **Third Place Ph.D. Student Competition Display.**
- Fung, J.M., Harmon, B.L., Eigenbrode, S.D., Schaffner U. and Schwarzländer, M. A weevil's movement can inform environmental safety assessments in biological weed control. Pacific Branch Entomological Society of America. ONLINE, April 2-5, 2021.
- Schwarzländer, M. Prospects for the biological control of *Phragmites australis*. Joint Meeting of the WAPMS and WSWS, March 13-16, 2017, Coeur d'Alene, ID. (Invited).
- Kafle, B.D., Eigenbrode, S.D., and Schwarzländer M. Incorporating insect sensory behavior in host-specificity testing for safety assessments in classical weed biological control. Pacific Branch Entomological Society of America. April 2-5, 2017, Portland, OR. First Place M.S. Student Competition.
- Fung, J.M., Nepal, K., Kafle, B.D., Eigenbrode, S.D., and Schwarzländer, M. Locomotory responses to olfactory cues during host finding can inform environmental safety assessments of biological weed control agents. Pacific Branch Entomological Society of America. April 2-5, 2017, Portland, OR.
- Gaskin, J. and Schwarzländer, M. Genetics of invasive mustards. 4<sup>th</sup> NRIPC Conference, October 17-20, 2016, Boise, ID.
- Schwarzländer, M. Biological control of invasive mustards situation stateside. 4<sup>th</sup> NRIPC Conference, October 17-20, 2016, Boise, ID.
- John Gaskin and Mark Schwarzländer. Genetic population structure of rush skeletonweed in North America and effects on biological control agent attack. 4<sup>th</sup> NRIPC Conference, October 17-20, 2016, Boise, ID.
- Schwarzländer, M. and Harmon, B. Host plant resistance in rush skeletonweed to the rush skeletonweed rust *Puccinia chondrillinae*. 4<sup>th</sup> NRIPC Conference, October 17-20, 2016, Boise, ID.
- Schwarzländer, M. and Milan, J. Developing a multi-agency pest management strategic plan (PMSP). . 4<sup>th</sup> NRIPC Conference, October 17-20, 2016, Boise, ID. .
- Kafle, B., Eigenbrode, and Schwarzländer, M. Role of plant volatile cues in the host finding and environmental safety assessment of the weevil *Mogulones crucifer*, a biological control agent of *Cynoglossum officinale*. 4<sup>th</sup> NRIPC Conference, October 17-20, 2016, Boise, ID.
- Schwarzländer, M. and Weed, A.S. Simple citizen science monitoring programs generate a wealth of data to assess weed biocontrol effects. 4<sup>th</sup> NRIPC Conference, October 17-20, 2016, Boise, ID.
- Price, J. and Schwarzländer, M. Forty years biological control of Canada thistle in the western United States: post-release efficacy assessment of *Urophora cardui* and *Hadroplontus litura*. Pacific Branch Entomological Society of America. April 6-9, 2014, Tuscon, AZ.
- Park, I., Schwarzländer, M. and Eigenbrode, S.D. Crossmodal integration to assess the environmental safety of *Mogulones borraginis*. Pacific Branch Entomological Society of America. April 6-9, 2014, Tuscon, AZ.
- Rendon, J. and Schwarzländer, M. Role of chemical, visual, and surface wax cues in the host selection

- behavior of *Ceutorhynchus cardariae*, a potential control agent for *Lepidum draba*. Pacific Branch Entomological Society of America. April 6-9, 2014, Tuscon, AZ.
- Schwarzländer, M. Idaho's Standard Impact Monitoring Protocaol (SIMP) for the landscape scale assessment of weed biocontrol. W3185 Annual Meeting. October 27-29, 2014, Kauai, HI.
- Schwarzländer, M. and Hinz, H.L. Successes we may not have had: A retrospective analysis of selected weed biocontrol agents in the United States. W3185 Annual Meeting. October 27-29, 2014, Kauai, HI.
- Schwarzländer, M. Host plant resistance in the rush skeletonweed rust *Puccinia chondrillina*. Rush Skeletonweed Biocontrol Consortium Meeting. The 3rd Northern Rockies Invasvie Plant Council Conference. February 10-14, 2014, Airway Heights, WA.
- Schwarzländer, M. Host-selection behavior of the hoary cress petiole gall weevil *Ceutorhynchus cardariae*. Mustards Biocontrol Consortium Meeting. The 3rd Northern Rockies Invasvie Plant Council Conference. February 10-14, 2014, Airway Heights, WA.
- Schwarzländer, M. Areawide effcet of *Mecinus janthiniformis* on Dalmatain toadflax in Idaho. Dalmatian and Yellow Toadflax Biocontrol Consortium Meeting. The 3rd Northern Rockies Invasvie Plant Council Conference. February 10-14, 2014, Airway Heights, WA.
- Schwarzländer, M., Winston, R.L., Hinz, H.L. and Bargeron, C. The new online version of "Biological Control of Weeds A World Catalogue of Agents and Their Target Weeds." The 3rd Northern Rockies Invasvie Plant Council Conference. February 10-14, 2014, Airway Heights, WA.
- Gaskin, J., Schwarzländer, M., Grevstad, F., Haverhals, M.A., Bourchier, R. and Miller, T.. Extreme differences in population structure and genetic diversity for three invasvie congeners: knotweeds in western North America. The 3rd Northern Rockies Invasvie Plant Council Conference. February 10-14, 2014, Airway Heights, WA.
- Hinz, H.L. and Schwarzländer, M.. The process for overseas development of new biological control agents for weeds. The 3rd Northern Rockies Invasvie Plant Council Conference. February 10-14, 2014, Airway Heights, WA.
- Park, I, Schwarzländer, M. and Eigenbrode, S.E. Investigating the role of flowers and their scents in the host selection of the seed-feeding weevil, *Mogulones borraginis*. The 3rd Northern Rockies Invasvie Plant Council Conference. February 10-14, 2014, Airway Heights, WA.
- Price, J. and Schwarzländer, M. Forty years later: post-release assessment of *Urophora cardui* and *Hadroplontus litura*, biological control agents for Canada thistle in the western United States. The 3rd Northern Rockies Invasvie Plant Council Conference. February 10-14, 2014, Airway Heights, WA.
- Inskeep, J., Weed, A.S., Schwarzländer, M., Harmon, B.L. and Scott, T. Influence of varying soil nutrient conditions on the population dynamics of *Mecinus janthiniformis*, a stem-mining weevil of Dalmatian toadflax (*Linaria dalmatica*). Pacific Branch Meeting, Entomological Society of America. March 25-28, 2012. Portland, OR. First Place Poster Presentation Undergraduate Students.
- Park, I., Schwarzländer, M. and Eigenbrode, S.D. Assessing olfactory and visual cues involved in the host selection behavior of the potential biological control agent *Mogulones borraginis* to improve prerelease host range predictions. Pacific Branch Meeting, Entomological Society of America. March 25-28, 2012, Portland, OR.
- Price, J., Schwarzländer, M. and Harmon, B.L. Post-release assessment of the efficacy of *Urophora cardui* and *Hadroplontus litura*, biological control agents of Canada thistle. Pacific Branch Meeting, Entomological Society of America. March 25-28, 2012, Portland, OR.
- Schwarzländer, M. and Weed, A.S. A standardized impact monitoring protocol (SIMP) for the assessment of weed biological control efficacy. Pacific Branch Meeting, Entomological Society of America. March 25-28, 2012, Portland, OR.
- Scott, T., Weed, A.S, Schwarzländer, M., Harmon, B.L. and Inskeep, J. Interactive effects of (*Mecinus janthiniformis*) herbivory and varying soil resource conditions on the performance of Dalmatian

- toadflax, (*Linaria dalmatica*). Pacific Branch Meeting, Entomological Society of America. March 25-28, 2012, Portland, OR. **Second Place Poster Presentation Undergraduate Students.**
- Park, I., Schwarzländer, M., Eigenbrode, S.D. Chemical Ecology Approaches for the Host Range Assessment of *Mogulones borraginis*, a Biocontrol Agent for Houndstongue. 2011 Pacific Branch Meeting, Entomological Society of America. Waikoloa Village. 28 March 2011. Big Island, HI.
- Rapo, C., Eigenbrode, D., Hinz, H.L., Gaskin, J.F., Price, W.J., Schaffner, U. and Schwarzländer, M. Metabolic profiling: A new tool in the predication of host-specificity in classical biological control of weeds. 2011 Pacific Branch Meeting, Entomological Society of America. Waikoloa Village. 28 March 2011. Big Island, HI.
- Weed, A.S. and Schwarzländer, M. Evaluating statewide impact of weed biological control using the Standardized Impact Monitoring Protocol (SIMP). 2011 Pacific Branch Meeting, Entomological Society of America. Waikoloa Village. 28 March 2011. Big Island, HI.
- Gibson, R. and Schwarzländer, M. Dyer's woad demography study in southeastern Idaho. 2<sup>nd</sup> Conference of the Northern Rockies Invasive Plant Council (NRIPC). 26 October 2010. Coeur d'Alene, ID.
- Hinz, H.L., Gassmann, A. and Schwarzländer, M. Predicted versus realized host range of biological weed control agents. 2<sup>nd</sup> Conference of the Northern Rockies Invasive Plant Council (NRIPC). 26 October 2010. Coeur d'Alene, ID.
- Park, I. and Schwarzländer, M. New tools for the host range assessment of *Mogulones borraginis*, a biocontrol agent for houndstongue. 2<sup>nd</sup> Conference of the Northern Rockies Invasive Plant Council (NRIPC). 26 October 2010. Coeur d'Alene, ID.
- Szűcs, M., Schwarzländer, M. and Gaskin, J.F. Establishment patterns and hybridization of different biotypes of the biological control agent *Longitarsus jacobaeae*. 2<sup>nd</sup> Conference of the Northern Rockies Invasive Plant Council (NRIPC). 26 Ocotober 2010. Coeur d'Alene, ID.
- Weed, A.S. and Schwarzländer, M. Evaluating statewide biocontrol using the Standardized Impact Monitoring Protocol (SIMP): A case study for Dalmatian toadflax. 2<sup>nd</sup> Conference of the Northern Rockies Invasive Plant Council (NRIPC). 26 October 2010. Coeur d'Alene, ID.
- Schwarzländer, M. and Hinz, H.L. Natural Enemy Diversity does not necessarily enhance weed biological control efficacy. 92<sup>nd</sup> Annual Meeting of the Pacific Branch of the Entomological Society of America. 30 March 2 April 2008. Napa, CA.
- Schwarzländer, M. and Winston, R.L. Are seed-feeding insects adequately controlling yellow starthistle, *Centaurea solstitialis*, in the Western U.S.? 92nd Annual Meeting of the Pacific Branch of the Entomological Soceity of America. 30 March 2 April 2008. Napa, CA.
- Winston, R.L. and Schwarzländer, M. Biological control as a management tool for plant communities infested with yellow starthistle. 92<sup>nd</sup> Annual Meeting of the Pacific Branch of the Entomological Society of America. 30 March 2 April 2008. Napa, CA.
- Schwarzländer, M. The genotypes of rush skeletonweed in the Pacific Northwest and implications for biological control. Oregon Vegetation Management Society Annual Meeting. 16 November 2007. Seaside, OR.
- Schwarzländer, M., Winston, R.L. and Cole, M. Competitive interactions and Impact of biological control agents on yellow starthistle in Idaho. Western Society of Weed Science Annual Meeting. 14-16 March 2006. Reno, NV.
- Szűcs, M., Anderson, C.L. and Schwarzländer, M. Landscape genetics and climatic associations of flea beetle lineages, and implications for biocontrol of tansy ragwort. Entomological Society of America Pacific Branch Meeting. 6-8 March 2006. Maui, HI. 2<sup>nd</sup> Prize Pacific Branch Annual Meeting, Graduate Student Competition.
- Winston, R.L. and Schwarzländer, M. The efficacy of biological control against yellow starthistle in the hell's canyon ecosystem. Entomological Society of America Pacific Branch Meeting. 6-8 March 2006. Maui, HI.
- Andreas, J.E. and Schwarzländer, M. Environmental safety of a weed biological control agent of

- houndstongue in regard to endangered Boraginaceae species. Pacific Branch Entomological Society of America Annual Meeting. 20-23 June 2004. Bozeman, MT. 1<sup>st</sup> Prize Pacific Branch Annual Meeting, Graduate Student Competition.
- Cripps, M.G., McKenney, J.L., Hinz, H.L. and Schwarzländer, M. Comparative analysis of the insect community structure on *Lepidium draba* in its indigenous and introduced ranges. Pacific Branch Entomological Society of America Annual Meeting. 20-23 June 2004.Bozeman, MT.
- Mckenney, J.L., Cripps, M.G., Hinz, H.L. and Schwarzländer, M. Increased growth vigor of the mustard *Lepidium* draba L. Provides support for the enemy release hypothesis. Pacific Branch Entomological Society of America Annual Meeting. 20-23 June 2004. Bozeman, MT.
- Schwarzländer, M. The potential for biological control of *Phragmites australis* in North America. Western Aquatic Plant Management Society. Annual Meeting. 26-27 March 2002. Coeur d'Alene, ID.
- Schwarzländer, M., Hinz, H.L., McKenney, J.L., and Cripps, M.G. Pre-release investigations on the ecology and herbivory pressure of *Cardaria draba*. 'Biological Control in Plant Pest Management Systems'. W1185 Western region Biological Control Working Group. Annual Meeting. 1-2 October 2002. Boulder, CO.
- Schwarzländer, M. 'Biological control in plant pest management systems' W185 Western Region Biological Control Working Group. Annual Meeting. 9-12 October 2001. Lake Tahoe, CA.
- Schwarzländer, M. Influence and synergistic effects of above and below-ground herbivory by two hostspecific weevils and plant competition on the performance of houndstongue. 85<sup>th</sup> Annual Meeting of the Entomological Society of America Pacific Branch. 24-27 July 2001. Park City, UT.

#### State:

- **Schwarzländer, M.** New biological control agents for weeds in Idaho. Idaho Weed Conference. 11 January 2023. Boise, ID (143 participants).
- Schwarzländer, M. What is new in biological weed control in Idaho? Idaho Weed Conference. 11 January 2022. Boise, ID (134 participants).
- Schwarzländer, M. Weed biological for some of the region's most important weeds. Tribal Invasive Species Training, 5 July 2022. Lewiston, ID. (52 participants).
- Schwarzländer, M. Biological control of rush skeletonweed: Investigations on *Sphenoptera foveola*. Montana Noxious Weed Trust Fund. 9 August 2022. Helena, MT. ONLINE (35 participants).
- Schwarzländer, M. What is new in biological weed control? Idaho Weed Conference. 12 January 2021. ONLINE (128 participants).
- Schwarzländer, M. New biological control options in the region. Tribal Invasive Species Training. 24 May 2020. ONLINE. (47 participants).
- Schwarzländer, M. Biological control of houndstongue and rush skeletonweed. Montana Noxious Weed Conference. 16 January 2021. ONLINE (221 participants).
- Schwarzländer, M. What is new in biological weed control? Idaho Weed Conference. 12 January 2021. Boise, ID (98 participants).
- Schwarzländer, M. New biological control options in the region. Tribal Invasive Species Training. 26 May 2020. ONLINE. (38 participants).
- Schwarzländer, M. Biological weed control research update. Idaho Weed Conference. 17 January 2019. Boise, ID. (63 participants).
- Schwarzländer, M. Biological weed control research update. Idaho Weed Conference. 18 January 2018. Boise, ID. (91 participants).
- Schwarzländer, M. Research update on biological control research. Idaho Weed Conference. 19 January 2017. Boise, ID. (121 participants).
- Schwarzländer, M. Research update: 15 years of biological control research in Idaho. Idaho Weed

- Conference. 31 January 2016. Boise, ID. (95 participants).
- Schwarzländer, M. Research update: Update on biological control research in Idaho. Idaho Weed Conference. 28 January 2015. Boise, ID. (87 participants).
- Schwarzländer, M. Research update: Biological control research in Idaho. Idaho Weed Conference. 1 February 2014. Boise, ID. (93 participants).
- Schwarzländer, M. Research update: 10 years of biological control research in Idaho. Idaho Weed Conference. 31 January 2013. Boise, ID. (95 participants).
- Schwarzländer, M. and Milan, J.D. New biological control agents in the pipeline. Idaho Weed Conference. 02 February 2012. Boise, ID. (80 participants).
- Schwarzländer, M. Update on research for new biocontrol agents. Idaho Weed Conference. 3 March 2011. Boise, ID. (89 participants).
- Weed, A.S. and Schwarzländer, M. Evaluation of performance using long-term monitoring. Idaho Weed Conference. 3 March 2011. Boise, ID. (75 participants).
- Schwarzländer, M. Where are we with new bugs for whitetop, dyers woad, and houndstongue? 9<sup>th</sup> Idaho Weed Conference. 18 February 2009. Nampa ID. (83 participants).
- Schwarzländer, M. and Haverhals, M.A. The complexity of rush skeletonweed and invasive hawkweeds What it means for biocontrol? 9<sup>th</sup> Idaho Weed Conference. 18 February 2009. Nampa, ID. (79 participants)
- Schwarzländer, M. Update on research efforts for the biological control of rush skeletonweed and houndstongue. 8th Idaho Weed Conference. 31 January 2008. Nampa, ID. (68 participants).
- Schwarzländer, M. Update on research efforts for the biological control of invasive mustards. 8<sup>th</sup> Idaho Weed Conference. 31 January 2008. Nampa, ID. (71 participants).
- Brown, L.S. and Schwarzländer, M. Biological control of Dalmatian toadflax with the stem-mining weevil *Mecinus janthinus*. 7<sup>th</sup> Idaho Weed Conference. 1 February 2007. Nampa, ID. (72 participants).
- Schwarzländer, M. and Parsons, L.K. Differences of Rush Skeletonweed Forms in the Pacific Northwest and how they affect Biocontrol Efforts. 7<sup>th</sup> Idaho Weed Conference. 1 February 2007. Nampa, ID. (54 participants).
- Hinz, H.L. and Schwarzländer, M. Biological control of hoary cress, perennial pepperweed, and Dyers woad, 6<sup>th</sup> Idaho Weed Conference. 1-2 February 2006. Nampa, ID. (62 participants).
- Schwarzländer, M. Biocontrol works Sometimes! 6<sup>th</sup> Idaho Weed Conference. 1-2 February 2006. Nampa, ID. (56 participants).
- Winston, R.L. and Schwarzländer, M. Yellow starthistle biocontrol research, 6<sup>th</sup> Idaho Weed Conference. 1-2 February 2006. Nampa, ID. (86 participants).
- Milan, J.D. and Schwarzländer, M. Impact of the rush skeletonweed mite and the rush skeletonweed rust in southern Idaho. Idaho Weed Control Association. 5<sup>th</sup> Idaho Weed Conference. 1-3 February 2005. Nampa, ID.
- Schwarzländer, M. Biological control of weeds Research in Idaho Update. Idaho Weed Control Association. 1-3 February 2005. 5<sup>th</sup> Idaho Weed Conference, Nampa, ID. (52 participants).
- Schwarzländer, M. Implementation of Biological Control for Rangeland Weeds in Idaho. 5<sup>th</sup> Idaho Weed Conference. 1-3 February 2005. Nampa, ID. (187 participants).
- Schwarzländer, M. Nursery establishment, distribution and monitoring of important biological control agents for knapweeds, purple loosestrife and toadflaxes. 4<sup>th</sup> Idaho Weed Conference. 4-5 February 2004. Nampa, ID. (69 participants).
- Schwarzländer, M. Biological control of weeds Research in Idaho Update. Idaho Weed Control Association. 4<sup>th</sup> Idaho Weed Conference. 5-7 February 2004. Nampa, ID. (72 participants).
- Schwarzländer, M. Biological control of weeds Research in Idaho Update. Idaho Weed Control Association. 3<sup>rd</sup> Idaho Weed Conference. 5-7 February 2003. Nampa, ID. (50 participants).

- Schwarzländer, M. New University of Idaho biological control research results. Idaho Weed Conference. 7 February 2003. Nampa, ID. (55 participants).
- Schwarzländer, M. Biological control of weeds Research in Idaho. Idaho Weed Control Association. 2<sup>nd</sup> Idaho Weed Conference. 6-8 February 2002. Nampa, ID. (62 participants).
- Schwarzländer, M. New biological control agents for the management of weeds in Idaho. Idaho Weed Control Association. 1st Idaho Weed Conference. 5-7 February 2001. Nampa, ID. (48 participants).

# Grants and Contracts Awarded - Development (D), Application and Implementation (A&I), Extension (E) Discovery (DI), Outreach/Application/Engagement (OAE). (§ Denotes Competitive Grant)

#### 2023 Grants and Contracts Awarded (Sole Spending Authority: \$406,998).

- Schwarzländer, M. \$155,000. Biological Control Agent Development for Idaho CESU Agreement. USDI BLM Idaho. 09/20/23-09/19/28. (OAE)
- Schwarzländer, M. \$20,000. Biological control of dyer's woad CESU Agreement. USDI BLM. 09/24/21-09/30/2024. (OAE)
- Schwarzlaender, M. \$20,000. Biological control of *Crupina vulgaris* in Idaho and Oregon Research Service Agreement. USDA ARS NPARL Montana 08/14/2023-06/30/2024. **(OAE)**
- Schwarzlaender, M. \$105,056. Biological control implementation for *Crupina vulgaris* in Idaho and Oregon Cooperative Agreement USDA ARS FDWS Maryland. 09/01/23-04/30/2024. (OAE)
- Schwarzlaender, M. \$101,942. Biological control of houndstongue, common crupina and dyer's woad. ISDA Special Project. 08/01/2023-07/31/24. (OAE)
- Schwarzlaender, M. \$5,000. Biological Control. Research gift Clearwater RC&D. (E)

# 2022 Grants and Contracts Awarded (Sole Spending Authority: \$235,254).

- Schwarzländer, M. \$185,000. Biological Control Agent Evaluation Development CESU Agreement. USDI BLM Idaho. 10/01/18-07/31/23. (OAE)
- Schwarzländer, M. \$45,254.16. Biological control of *Crupina vulgaris* in Idaho Cooperative Agreement USDA ARS Maryland. 09/01/22-08/31/23. **(OAE)**
- Schwarzlaender, M. \$5,000. Biological Control Technology Transfer. Nez Perce Tribe Biocontrol Center. 07/01/22-06/30/23. (E)

## 2021 Grants and Contracts Awarded (Sole Spending Authority: \$217,000).

- Schwarzländer, M. \$130,000. Biological Control Agent Evaluation Development CESU Agreement. USDI BLM Idaho. 10/01/18-07/30/22. (OAE)
- Schwarzländer, M. \$44,000. Rearing dyer's woad seed weevil for field release in Idaho CESU Agreement. USDI BLM Idaho. 09/24/21-09/30/24. (OAE)
- Rashed, R., Clements, J., Hirnyck, R.E., Hutchinson, J.S., Marshall, J., Schwarzländer, M. \$845,286. (\$38,000 sole spending authority). Extension Implementation Plan for IPM in Idaho 2021-2024. USDA AFRI CPPM EIP 09/01/21-08/31/24. (E)
- Schwarzlaender, M. \$5,000. Biological Control Technology Transfer. Nez Perce Tribe Biocontrol Center. 07/01/20-06/30/21. (E)

#### 2020 Grants and Contracts Awarded (Sole Spending Authority: \$314,466).

- Schwarzländer, M. \$162,000. Biological Control Agent Evaluation Development CESU Agreement. USDI BLM Idaho. 10/01/18-09/30/21. (**OAE**)
- Schwarzländer, M. \$48,000. Biological Control Agent Evaluation Development CESU Agreement. USDI BLM Idaho. 10/01/18-09/30/21. **(OAE)**
- §Schwarzländer, M. \$27,520. Developing Sphenoptera foveola (Gebler) (Coleoptera: Buprestidae), the bronze skeletonweed root borer as a biological control agent for rush skeletonweed in the United States. Montana Noxious Weeds Trust Fund. 04/01/19-10/31/21. (OAE)

- §Schwarzländer, E. Hyrnick and Rashed, R. 174,522. (\$61,946 sole spending authority). Extension Implementation Plan for IPM in Idaho 2020-2021. USDA AFRI CPPM EIP 09/01/20-08/31/21. (OAE)
- Schwarzlaender, M. \$10,000. Biological Control Research Yellow Starthistle. Idaho Department of Lands. 06/01/20-05/31/21. (OAE)
- Schwarzlaender, M. \$5,000. Biological Control Technology Transfer. Nez Perce Tribe Biocontrol Center. 07/01/20-06/30/21. (E)

#### 2019 Grants and Contracts Awarded (Sole Spending Authority: \$226,000).

- Schwarzländer, M. \$88,000. Biological Control Agent Evaluation Development CESU Agreement. USDI BLM Idaho. 10/01/18-09/30/23. **(OAE)**
- Schwarzländer, M. \$100,000. Biological Control Agent Evaluation Development CESU Agreement. USDI BLM Idaho. 10/01/18-09/30/23. (OAE)
- §Schwarzländer, M. \$33,000. Righting the ship: Using newly BCIP-developed host specificity assessment techniques to demonstrate the environmental safety of the houndstongue root weevil with the goal to repetition the biocontrol insect for release in the United States. USDA Forest Service BCIP grant program. 04/01/19-03/31/20. (OAE)
- Schwarzlaender, M. \$5,000. Biological Control Research. Nez Perce Biocontrol Center. 07/01/18-06/30/19. (DI)

# 2018 Grants and Contracts Awarded (Sole Spending Authority: \$249,000).

- Schwarzländer, M. \$150,000. Biological Control Agent Evaluation Development CESU Agreement. USDI BLM Idaho. 10/01/18-09/30/23. (OAE)
- Schwarzländer, M. \$69,000. Biological Control Agent Evaluation and Development CESU Agreement. USDI BLM Oregon. 09/18/13-09/17/19. (DI)
- Schwarzländer, M. \$10,000. Biological Control of Houndstongue, Rush skeletonweed and Hoary Cress Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 04/01/14-03/31/20. (DI)
- Schwarzländer, M. \$15,000. Biological Control Outreach for Tribal Nations. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/14-12/31/19. (E)
- Schwarzlaender, M. \$5,000. Biological Control Research. Nez Perce Biocontrol Center. 07/01/18-06/30/19. (DI)

# 2017 Grants and Contracts Awarded (Sole Spending Authority: \$586,049).

- \$Schwarzländer, M., Bechinski, E. Hyrnick, R. 549,609. (\$325,283 sole spending authority). Extension Implementation Plan for IPM in Idaho 2017-2020. USDA AFRI CPPM EIP 09/01/17-08/31/20. (OAE). (E)
- Schwarzländer, M. \$30,000. Biological Control of Weeds Technology Transfer. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/17-12/31/18. (OAE)
- Schwarzländer, M. \$78,000. Biological Control Agent Evaluation and Development CESU Agreement. USDI BLM Oregon. 09/18/13-09/17/18. (DI)
- Schwarzländer, M. \$12,259. Biological Control of Houndstongue, Rush skeletonweed and Hoary Cress Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 04/01/14-03/31/19. (DI)
- Schwarzländer, M. \$25,000. Biological Control of Weeds Hoary Cress. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/14-12/31/18. (DI)
- §Schwarzländer, M. \$100,000. Righting the ship: Using newly BCIP-developed host specificity assessment techniques to demonstrate the environmental safety of the houndstongue root weevil with the goal to repetition the biocontrol insect for release in the United States. USDA Forest Service BCIP grant program. 04/01/17-03/31/20. (OAE)
- Schwarzlaender, M. \$15,000. Biological Control of rush skeletonweed (*Chondrilla juncea*) Rush Skeletonweed Consortium. 08/01/17-07/31/18. **(DI)**

# 2016 Grants and Contracts Awarded (Sole Spending Authority: \$335,000).

- Schwarzländer, M. \$8,000. Developing Biological Control for Houndstongue, Hoary Cress and Dalmatian Toadflax. Using the Houndstongue Seed Weevil. Service Agreement. South Dakota Department of Agriculture SISMA. 04/01/16-03/31/17. **(DI)**
- Schwarzländer, M. \$77,000. Biological Control Agent Evaluation and Development CESU Agreement. USDI BLM Oregon. 09/18/13-09/17/18. (DI)
- Schwarzländer, M. \$10,000. Biological Control of Houndstongue, Rush skeletonweed and Hoary Cress Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 04/01/14-03/31/19. (DI)
- Schwarzländer, M. \$25,000. Biological Control of Weeds Hoary Cress. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/14-12/31/17. (DI)
- Schwarzländer, M. \$15,000. Biological Control of Weeds Technology Transfer. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/13-12/31/17. (OAE)
- §Schwarzländer, M. National Competitive USDA BCIP: \$100,000. Assessing population sizes, biocontrol potential and mass production of the root boring moth *Agapeta zoegana* for areawide implementation and monitoring of spotted knapweed biocontrol. USDA Forest Service BCIP grant program. 06/01/16-05/31/19 (OAE).

#### 2015 Grants and Contracts Awarded (Sole Spending Authority: \$305,000).

- Mark Schwarzlaender. \$20,000. Developing Biological Control for Houndstongue, Hoary Cress and Dalmatian Toadflax. Using the Houndstongue Seed Weevil. Service Agreement. South Dakota Department of Agriculture SISMA. 04/01/15-03/31/16. (DI)
- Mark Schwarzlaender. \$185,000. Biological Control Agent Evaluation and Development CESU Agreement. USDI BLM Idaho. 06/01/14-08/31/17. (OAE)
- Mark Schwarzlaender. \$45,000. Biological Control Agent Evaluation and Development CESU Agreement. USDI BLM Oregon. 09/18/13-09/17/18. (DI)
- Mark Schwarzlaender. \$15,000. Biological Control of Houndstongue, Rush skeletonweed and Hoary Cress Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 04/01/14-03/31/19. (DI)
- Mark Schwarzlaender. \$25,000. Biological Control of Weeds Hoary Cress. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/14-12/31/17. (DI)
- Mark Schwarzlaender. \$15,000. Biological Control of Weeds Technology Transfer. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/13-12/31/17. (OAE)

#### 2014 Grants and Contracts Awarded (Sole Spending Authority: \$301,355).

- Schwarzländer, M. \$20,000. Developing Biological Control for Houndstongue, Hoary Cress and Dalmatian Toadflax. Using the Houndstongue Seed Weevil. Service Agreement. South Dakota Department of Agriculture SISMA. 04/01/14-03/31/15. (DI)
- Schwarzländer, M. \$150,000. Biological Control Agent Evaluation and Development CESU Agreement. USDI BLM Idaho. 06/01/14-08/31/17. (OAE)
- Schwarzländer, M. \$20,000. Biological Control of Houndstongue, Rush skeletonweed and Hoary Cress Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 04/01/14-03/31/19. (DI)
- Schwarzländer, M. \$14,355. Biological Control of Canada Thistle Cooperative Agreement. USDI BÍA Great Plains Regional Office. 09/01/14-12/31/15. (OAE)
- Schwarzländer, M. \$25,000. Risk assessment and monitoring of target and nontarget plant utilization by the houndstongue root weevil *Mogulones crucifer* Pallas (Coleoptera, Curculionidae) in northern Washington and Idaho Cooperative Agreement. USDI APHIS PPQ CPHST. 09/01/14-12/31/15. (DI)
- Schwarzländer, M. \$32,000. Weed Biocontrol Outreach for Tribal Nations in the Western United States Competitive USDA Farm Bill Grant. USDI APHIS. 09/01/14-12/31/15. (OAE)
- Schwarzländer, M. \$25,000. Biological Control of Weeds Hoary Cress. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/14-12/31/15. (**DI**)
- Schwarzländer, M. \$15,000. Biological Control of Weeds Technology Transfer. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/13-12/31/15. (OAE)

#### 2013 Grants and Contracts Awarded (Sole Spending Authority: \$337,855)

- §Schwarzlaender, M., Delaney, K., and Sing, S. \$50,000. Defining Relevant Russian Olive Control Through Facilitated Researcher-Stakeholder Dialogue. USDA NIFA AFRI A1131 Controlling Weedy and Invasive Plants. 09/01/13-08/31/14. (D)
- Schwarzlaender, M. \$18,000. Developing Biological Control for Houndstongue Using the Houndstongue Seed Weevil. Service Agreement. Wyoming Weed and Pest Districts. 05/01/13-04/30/14. (D)
- Schwarzlaender, M. \$57,500. Development of Biological Control Educational Materials: revision of Julien's Catalogue, USDA FS Eastern Region, FHTET 04/20/10-04/19/15. (A&I/E)
- Schwarzlaender, M. \$38,000. Biological Control Agent Evaluation and Development CESU. USDI BLM Oregon. 10/01/13-09/30/14. (A&I)
- Schwarzlaender, M. \$88,000. Biological Control Agent Evaluation and Development CESU Agreement. USDI BLM Idaho. 09/01/12-08/31/17. (A&I)
- Schwarzlaender, M. \$7,000. Biological Control of Hawkweeds Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 03/01/13-03/28/14. (E)
- Schwarzlaender, M. \$14,355. Biological Control of Canada Thistle Cooperative Agreement. USDI BIA Great Plains Regional Office. 09/01/13-12/31/14. (E)
- Schwarzlaender, M. \$25,000. Risk assessment and monitoring of target and nontarget plant utilization by the houndstongue root weevil *Mogulones crucifer* Pallas (Coleoptera, Curculionidae) in northern Washington and Idaho Cooperative Agreement. USDI APHIS PPQ CPHST. 09/01/13-12/31/14. (A&I)
- Schwarzlaender, M. \$25,000. Biological Control of Weeds Hoary Cress. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/13-12/31/14. (A&I)
- Schwarzlaender, M. \$15,000. Biological Control of Weeds Technology Transfer. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 08/01/13-12/31/14. (E)

# 2012 Grants and Contracts Awarded (Sole Spending Authority: \$374,000)

- §Schwarzländer, M., Park, I and Eigenbrode, S.E. \$115,000. Using *Mogulones borraginis*, a potential biocontrol agent for houndstongue and *Ceutorhynchus cardariae*, a potential biocontrol agent for hoary cress, to develop host-specificity testing methods based on olfactory and visual host selection behavior. National Competitive Grant: Technology Development for the Biological Control of Invasive Native and Non-Native Plants (BCIP). USDA Forest Service Forest Health Protection Forest Health Technology Enterprise Team (FHTET). 04/20/12-04/19/15. **(D)**
- Schwarzländer, M. \$19,000. Developing biological control for houndstongue using the houndstongue seed weevil. Service Agreement. Wyoming Weed and Pest Districts. 05/01/12-04/30/13. **(D)**
- Schwarzländer, M. \$28,000. Development of biological control educational materials: revision of Julien's Catalogue, USDA FS Eastern Region, FHTET 04/20/10-04/19/15. (A&I)
- Schwarzländer, M. \$7,500. Digitization and availability of proceedings of the International Symposium on Biological Control of Weeds. USDA Forest Service SPF FHP through University of Georgia. Cooperative Agreement. 03/01/12-02/28/13. (E)
- Schwarzländer, M. \$38,000. Developing biological control for hoary cress, perennial pepperweed and dyers woad CESU. USDI BLM Oregon. 06/21/08-06/20/13. (A&I)
- Schwarzländer, M. \$110,000. Biological control agent evaluation and development CESU agreement. USDI BLM Idaho. 09/01/12-08/31/17. (A&I)
- Schwarzländer, M.. \$8,500. Biological control of hawkweeds Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 03/01/12-03/28/13. (E)
- Schwarzländer, M. \$10,000. Biological control of Canada thistle Cooperative Agreement. USDI BIA Great Plains Regional Office. 06/01/12-09/30/13. (E)
- Schwarzländer, M. \$38,000. Risk assessment and monitoring of target and nontarget plant utilization by the houndstongue root weevil *Mogulones crucifer* Pallas (Coleoptera, Curculionidae) in northern Washington and Idaho Cooperative Agreement. USDI APHIS PPQ CPHST. 09/17/12-09/16/13. (A&I)

- Schwarzländer, M. \$19,000. Developing biological control for houndstongue using the houndstongue seed weevil. Service Agreement. Wyoming Weed and Pest Districts. 01/01/11-12/31/11. **(D)**
- Schwarzländer, M. \$75,200. Development of Biological Control Educational Materials: revision of Julien's Catalogue, USDA FS Eastern Region, FHTET 03/16/11-03/31/13. (A&I/E)
- Schwarzländer, M. \$7,500. Development of an online data entry portal for biological weed control information pilot project. University of Georgia/USDA SPF FHP Cooperative Agreement. 08/01/11-07/31/12. (A&I)
- Schwarzländer, M. \$58,000. Developing biological control for hoary cress, perennial pepperweed and dyers woad Service Agreement. USDI BLM Oregon/Washington. 03/11/11-06/20/13. (A&I)
- Schwarzländer, M. \$10,000. Biological control of hawkweeds Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 08/01/11-07/31/14. (E)
- Schwarzländer, M. \$50,000. Biological control development and outreach Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 06/01/11-12/31/12. (A&I)
- Schwarzländer, M. \$30,000. Biological control tribal outreach Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 06/01/11-12/31/12. (E)
- Schwarzländer, M. \$38,500. Risk assessment and monitoring of target and nontarget plant utilization by the houndstongue root weevil *Mogulones cruciger* Hbst. (Coleoptera, Curculionidae) in northern Washington and Idaho Cooperative Agreement. USDI APHIS PPQ CPHST. 07/01/11-06/30/12. (A&I)

## 2010 Grants and Contracts Awarded (Sole Spending Authority: \$277,000)

- Schwarzländer, M. \$19,000. Developing biological control for houndstongue using the houndstongue seed weevil. Service Agreement. Wyoming Weed and Pest Districts. 01/01/10-12/31/10. (D)
- Schwarzländer, M. \$25,000. Development of biological control educational materials: revision of Julien's Catalogue, USDA FS Eastern Region, FHTET 01/01/10-03/31/13. (E)
- Schwarzländer, M. \$15,000. Development of an online data entry portal for biological weed control information Pilot Project. USDA SPF FHP Cooperative Agreement. 08/01/09-07/31/10. (A&I)
- Schwarzländer, M. \$20,000. Developing biological control for hoary cress, perennial pepperweed and dyers woad Service Agreement. USDI BLM Oregon/Washington. 02/17/10-06/20/13. (A&I)
- Schwarzländer, M. \$10,000. Biological control of hawkweeds Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 08/01/10-07/31/14. (E)
- Schwarzländer, M. \$26,250. Biological control of Canada thistle Cooperative Agreement. USDI BIA Great Plains Regional Office. 06/01/10-06/30/12. (E)
- Schwarzländer, M. \$31,250. Biological control development and outreach Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 06/01/10-12/31/12. (A&I)
- Schwarzländer, M. \$38,500. Risk assessment and monitoring of target and nontarget plant utilization by the houndstongue root weevil *Mogulones cruciger* Hbst. (Coleoptera, Curculionidae) in northern Washington and Idaho Cooperative Agreement. USDI APHIS PPQ CPHST. 07/01/10-06/30/10. (A&I)
- §Schwarzländer, M. \$92,000. Development of the biological control impact analysis system (BIAS) for invasive plants. USDA FS Competitive Special Technology Development Program. USDAI FS STDP. 04/01/10-03/31/12. (A&I)

#### 2009 Grants and Contracts Awarded (Sole Spending Authority: \$730,500)

- Schwarzländer, M. \$15,000. Developing biological control for houndstongue using the houndstongue seed weevil. Service Agreement. Wyoming Weed and Pest Districts. 01/01/09-12/31/09. (D)
- Schwarzländer, M. \$7,000. Biological control of tansy ragwort. Service Contract Clearwater CWMA.

- 07/01/09-06/30/10. (A&I)
- Schwarzländer, M. \$41,000. Development of Biological Control Educational Materials: revision of Julien's Catalogue, Easter Region, FHTET. 01/01/10-12/31/10. (E)
- Schwarzländer, M. \$96,000. Reassessing the feasibility of an area-wide biological control program for Canada thistle using *Urophora cardui* and *Ceutorhynchus litura*. USDA SPF FHP Grant Competition. 04/01/09-02/31/12. (A&I)
- Schwarzländer, M. \$5,000. Development of an online data entry portal for biological weed control information Pilot Project. USDA SPF FHP Cooperative Agreement. 08/01/09-07/31/10. (A&I)
- Schwarzländer, M.. \$45,000. Developing biological control for hoarycress, perennial pepperweed and dyers woad Service Agreement. USDI BLM Oregon/Washington. 05/31/09-06/01/10. (A&I)
- Schwarzländer, M. \$5,000. Biological control of rush skeletonweed cost share challenge Agreement. USDI BLM Idaho. 01/01/09-12/31/09. (A&I)
- Schwarzländer, M. \$10,000. Biological control of hawkweeds Cooperative Agreement. USDI BLM Regional Rocky Mountain Office. 08/01/09-07/31/14. (E)
- Schwarzländer, M. \$5,000. Biological control of Canada thistle Cooperative Agreement. USDI BIA Great Plains Regional Office. 01/01/09-12/31/09. (E)
- Schwarzländer, M. \$12,000. Biological control of Canada thistle in South Dakota Cooperative Agreement. USDI APHIS PPQ. 06/01/09-05/31/10. (A&I)
- Schwarzländer, M. \$7,500. Biological control of invasive hawkweeds Cooperative Agreement. USDI APHIS PPQ. 06/01/09-05/31/10. (E)
- Schwarzalender, M. \$10,000. Biological control technology transfer workshops. Cooperative Agreement. USDI BIA Rocky Mountain Regional Office. 01/01/09-12/31/10. (E)
- Schwarzländer, M. \$300,000. Development of biological control project. USDI BLM Idaho. Special Grant Competition under ARRA. 09/01/09-08/31/11. (A&I)
- Schwarzländer, M. \$172,000. Development of new weed biological control agents. Special Technology Agreement (with Panhandle Lakes RC&D). USDI BLM Idaho. 11/01/09-10/31/10. (A&I, this grant is not a University of Idaho but a Panhandle Lakes RC&D account)

#### 2008 Grants and Contracts Awarded (Sole Spending Authority: \$183,000)

- Schwarzländer, M. \$19,000. Developing biological control for houndstongue using the houndstongue seed weevil. Service Agreement. Wyoming Weed and Pest Districts. 01/01/08-12/31/08. **(D)**
- Schwarzländer, M. \$10,000. Biological control of tansy ragwort. Service Contract Clearwater CWMA. 07/01/08-06/30/09. (A&I)
- Schwarzländer, M. \$31,000. Development of additional field guide card decks for noxious weeds and their biological control agents; development of a St. John's wort biological control manual. U.S. Forest Service; Eastern Region, FHTET. 12/01/08-05/23/10. (E)
- §Schwarzländer, M. \$93,000. Development of guidelines to assist managers with implementation of biological control of rush skeletonweed using the skeletonweed root moth. USDA FS National Special Technology Development (STDP) Grant Competition. 04/01/08-03/31/11. (A&I)
- Schwarzländer, M. \$25,000. Developing biological control for hoary cress, perennial pepperweed and dyers woad Service Agreement. USDI BLM Oregon/Washington. 05/31/08-06/01/09. (A&I)
- Schwarzländer, M. \$5,000. Biological control of rush skeletonweed Cost Share Challenge Agreement. USDI BLM Idaho. 01/01/08-12/31/08. (A&I)

#### 2007 Grants and Contracts Awarded (Sole Spending Authority: \$310,080)

Schwarzländer, M. \$81,490. Evaluation of hoary cress habitats and indigenous insect herbivory and support of foreign exploration for biological control. Idaho State Dept. of Agriculture. 03/16/07-03/15/08.

**(D)** 

- Schwarzländer, M. \$15,990. Developing biological control for houndstongue. Idaho State Department of Agriculture. 03/16/07-03/15/08. **(D)**
- Schwarzländer, M, \$14,200. Developing biological control for houndstongue using the houndstongue seed weevil. Service Agreement. Wyoming Weed and Pest Districts. 01/01.07-12/31/07. (D)
- Schwarzländer, M. \$20,000. Biological control of hoary cress and perennial pepperweed Memorandum of Agreement. USDI BIA. 04/01/07-03/31/08. (A&I)
- Schwarzländer, M. \$20,000. Biological control of Canada thistle on tribal lands in the Dakotas Memorandum of Agreement. USDA APHIS PPQ. 08/01/07-07/31/08. (A&I)
- Prather, T. and Schwarzländer, M. (\$25,000 spending authority). Yellow Starthistle and Perennial Pepperweed Research and Integrated Management in Idaho. USDA CSREES Special Cooperative Agreement 5325-220000-017-085 08/01/07-07/31/08. (**A&I**)
- Schwarzländer, M. \$5,800. Technology transfer field days for tribal and BIA land managers. Memorandum of Agreement, Bureau of Indian Affairs. 01/01/05-12/31/07. (E)
- Schwarzländer, M. \$10,000. Biological control of tansy ragwort. Service Contract Clearwater CWMA. 07/01/07-06/30/08. (A&I)
- Schwarzländer, M. \$49,900. Development of additional field guide card decks for noxious weeds and their biological control agents; development of a rush skeletonweed comprehensive management plan; development of a St. John's wort biological control manual. U.S. Forest Service, Eastern Region, FHTET. 12/01/07-12/31/09. (E)
- Schwarzländer, M. \$28,700. Biological control of rush skeletonweed and implementation of the rush skeletonweed moth in Idaho Service Agreement. RSWTF/ISDA. 03/16/07-03/15/08. (A&I)
- Schwarzländer, M. \$10,000. Biological control of yellow starthiste in Hells Canyon Memorandum of Agreement. USDI BLM Cottonwood District Office. 08/01/07-07/31/08. (A&I)
- Schwarzländer, M. \$29,000. Biological control of rush skeletonweed Cost Share Challenge Agreement. USDI BLM. 01/01/07-12/31/08. (A&I)

#### 2006 Grants and Contracts Awarded (Sole Spending Authority: \$359,053)

- §Brusven, P. and Schwarzländer, M. (\$36,750 spending authority). An operational demonstration project for the integrated management of rush skeletonweed (*Chondrilla juncea*) in Idaho and adjacent states. USDA NRCS GLCI. 09/01/06-12/31/07. (**A&I**)
- Schwarzländer, M. \$79,603. Evaluation of hoary cress habitats and indigenous insect herbivory, and support of foreign exploration for biological control. Idaho State Dept. of Agriculture. 01/01/06-12/31/06. (D)
- Schwarzländer, M. \$15,200. Implementation of biological control of rush skeletonweed Service Contract through Cost Share Agreement RSWTF/ISDA. 04/01/06-03/31/07. (A&I)
- Schwarzländer, M. \$20,000. Biological control of hoary cress and perennial pepperweed Memorandum of Agreement. USDI BIA. 04/01/06-12/31/06. (A&I)
- Mark Schwarzländer. \$10,000. Biological control of Canada thistle on tribal lands in the Dakotas Memorandum of Agreement. USDI BIA. 07/01/06-12/31/06. (A&I)
- Prather, T. and Schwarzländer, M. (\$25,000 spending authority). Yellow Starthistle Research and Technology Development in Idaho. USDA CSREES Special Cooperative Agreement 5325-220000-017-085 Amendment, 08/01/06-07/31/07. (**A&I**)
- Schwarzländer, M. \$37,500. Technology transfer field days for tribal and BIA land managers. Memorandum of Agreement, Bureau of Indian Affairs. 01/01/05-12/31/07. (E)
- Schwarzländer, M. \$10,000. Biological control of tansy ragwort. Service Contract Clearwater CWMA, 07/01/06-07/31/07. (A&I)

- Schwarzländer, M. \$33,000. Biological control education workshops for land managers, Memorandum of Agreement, Nez Perce Bio-Control Center, 02/01/06-02/28/07. (E)
- Mark Schwarzländer. \$11,000. Biological control release and research on rush skeletonweed, Service Contract, U.S. Forest Service, Nez Perce National Forest 05/01/06-07/31/07. (A&I)
- Mark Schwarzländer. \$6,000. Biological control impact monitoring, Wallowa Resources The Nature Conservancy, 08/01/06-09/30/07. (**A&I**)
- §Schwarzländer, M. and Weaver, D. (\$75,000 spending authority). Development of guidelines to assist managers with implementation of biological control of Dalmatian and yellow toadflax using *Mecinus janthinus*, an introduced stem mining weevil. USFS Special Technology Development Proposal. 04/01/06-03/31/09. (**A&I**)

# 2005 Grants and Contracts Awarded (Sole Spending Authority: \$221,400)

- Schwarzländer, M. \$27,500. Biological control of hoary cress and Canada thistle. USDA APHIS, Memorandum of Agreement. 04/01/05-03/31/06. **(D)**
- Schwarzländer, M. \$62,400. Evaluation of hoary cress habitats and indigenous insect herbivory, and support of foreign exploration for biological control. Idaho State Dept. of Agriculture. 01/01/04-12/31/04. **(D)**
- Schwarzländer, M. \$10,000. Biological control of hoary cress Memorandum of Agreement. USDI BIA. 04/01/05-12/31/05. (A&I)
- Prather, T. and Schwarzländer, M. (\$17,500 spending authority). Yellow Starthistle Research and Technology Development in Idaho. USDA CSREES Special Cooperative Agreement 5325-220000-017-085 Amendment, 08/01/05-07/31/06. (**A&I**)
- Schwarzländer, M. \$40,000. Technology transfer field days for tribal and BIA land managers. Memorandum of Agreement, Bureau of Indian Affairs. 01/01/05-12/31/07. (E)
- Schwarzländer, M. \$15,000. Biological control of tansy ragwort. Service contract Clearwater CWMA, 08/01/05-07/31/06. (A&I)
- Schwarzländer, M. \$10,000. Biological control of tansy ragwort. Task Order, Potlatch Corporation, 01/01/06-12/31/06. (A&I)
- Schwarzländer, M. \$25,000. Biological control education workshops for land managers, Memorandum of Agreement, Nez Perce Bio-Control Center, 03/01/05-02/28/06. (E)
- Schwarzländer, M. \$8,000. Biological control release and research on rush skeletonweed. Service Contract, U.S. Forest Service, Nez Perce National Forest 08/01/05-07/31/06. (A&I)
- Schwarzländer, M. \$6,000. Biological control impact monitoring, Wallowa Resources The Nature Conservancy, 10/01/05-09/30/06. (A&I)

## 2004 Grants and Contracts Awarded (Sole Spending Authority: \$254,600)

- Schwarzländer, M. \$11,900. Evaluating biocontrol of the invasive weed houndstongue. Idaho State Department of Agriculture. 01/01/04-12/31/04. **(D)**
- Schwarzländer, M. \$72,000. Evaluation of hoary cress habitats and indigenous insect herbivory, and support of foreign exploration for biological control. Idaho State Dept. of Agriculture. 01/01/04-12/31/04. **(D)**
- Schwarzländer, M. \$5,500. Biological control of rush skeletonweed Task Order. USDI BLM. Amendment. 08/31/04-12/31/04. (A&I)
- Schwarzländer, M. \$10,000. Biological control of hoary cress Memorandum of Agreement. USDI BIA. 04/01/04-12/31/04. (A&I)
- Schwarzländer, M. \$15,000. Assessing the environmental safety of *M. cruciger* and *M. borraginis*. Big Horn Drainage Weed and Pest Districts, Worland, WY. Service contract 01/01/05-12/31/05. (A&I)

- Schwarzländer, M. \$18,000. The impact of *Eustenopus villosus* on yellow starthistle Task Order. USDI BLM. Amendment 08/01/04-07/31/05. (**A&I**)
- Prather, T. and Schwarzländer, M. (\$17,500 spending authority). Yellow Starthistle Research and Technology Development in Idaho. USDA CSREES Special Cooperative Agreement 5325-220000-017-085. Amendment, 08/01/04-07/31/05. (A&I)
- Schwarzländer, M. \$25,000. Technology transfer field days for tribal and BIA land managers. Memorandum of Agreement, Bureau of Indian Affairs. 01/01/05-12/31/05. (E)
- Schwarzländer, M. \$20,000. Assessing the impact of biological control of rush skeletonweed. Memorandum of Agreement, U.S. Forest Service, 07/04/04-06/30/06. (A&I)
- Schwarzländer, M. \$10,000. Biological control of tansy ragwort. Service Contract Clearwater CWMA, 08/01/04-07/31/05. (A&I)
- Schwarzländer, M. \$10,000. Biological control of tansy ragwort. Task Order, Potlatch Corporation, 01/01/05-12/31/05. (A&I)
- Schwarzländer, M. \$25,000. Biological control education workshops for land managers, Memorandum of Agreement, Nez Perce Bio-Control Center, 01/01/04-12/31/04. (E)
- Schwarzländer, M. \$5,000. Production of biological control identification card sets, Service contract, U.S. Forest Service, 01/01/05-07/31/05. (E)
- Schwarzländer, M. \$9,700. Biological control identification card sets, Memorandum of Agreement, U.S. Forest Service, 01/01/05-07/31/05. (E)

# 2003 Grants and Contracts Awarded (Sole Spending Authority: \$230,490)

- Schwarzländer, M. \$11,490. Evaluating biocontrol of the invasive weed houndstongue. Idaho State Department of Agriculture. 04/01/03-12/31/03. **(D)**
- Schwarzländer, M. \$56,000. M. Evaluation of hoary cress habitats and indigenous insect herbivory, and support of foreign exploration for biological control. Idaho State Dept. of Agriculture. 04/01/03-12/31/03. (A&I)
- Schwarzländer, M. \$22,000. Biological control of rush skeletonweed Task Order. USDI BLM. 08/31/03-09/01/04. **(D)**
- Schwarzländer, M. \$10,000. Biological Control of hoary cress MOA. USDI BIA. 04/01/03-12/31/03. (D)
- Schwarzländer, M. \$20,000. Assessing the Environmental Safety of *Mogulones cruciger*. Big Horn Drainage Weed and Pest Districts, Worland, WY. 04/01/03-03/31/04. (A&I)
- Schwarzländer, M. \$20,000. The Impact of *Eustenopus villosus* on Yellow Starthistle Task Order. USDI BLM.. 08/01/03-07/31/04. (**A&I**)
- Prather, T., Schwarzländer, M., Wilson, L., Bunting, S. and Kingery, S. (\$21,000 spending authority). Yellow starthistle research and technology development in Idaho USDA CSREES Special Cooperative Agreement 5325-220000-017-085 08/01/03-07/31/04. (A&I)
- §Schwarzländer, M. \$45,000. Biological control of weeds implementation field days. EPA RGI Program. 08/01/03-12/31/04. (E)
- Schwarzländer, M. \$25,000. Technology transfer field days for tribal and BIA land managers. Memorandum of Agreement, Bureau of Indian Affairs. 03/17/03-12/31/03. (E)

## 2002 Grants and Contracts Awarded (Sole Spending Authority: \$137,000)

- §Schwarzländer, M, Prather, T. and Wilson, L. \$20,000. Evaluating biocontrol of the toxic, invasive weed, houndstongue to improve rangeland quality. David Little Livestock Range Management Endowment. 04/01/02-03/31/03. (A&I)
- Schwarzländer, M. and Prather, T. \$52,000. Evaluation of hoary cress habitats and indigenous insect herbivory, and support of foreign exploration for biological control. Idaho State Dept. of

- Agriculture. 04/01/01-12/31/02. (D)
- Schwarzländer, M. \$30,000. Biological control of rush skeletonweed. Task Order. USDI BLM. 08/31/02-09/01/03. (A&I)
- Schwarzländer, M. \$10,000. Biological Control of Hoary Cress MOA. USDI BIA. 07/17/02-12/31/02. **(D)**
- Prather, T., Schwarzländer, M., Wilson, L., Bunting, S. and Kingery, S. (\$25.000 spending authority). Yellow Starthistle Research and Technology Development in Idaho. USDA CSREES Special Cooperative Agreement 5325-220000-017-085 08/01/02-07/31/03. (A&I)

## 2001 Grants and Contracts Awarded (Sole Spending Authority: \$245,560)

- §Schwarzländer, M., Prather, T. and Wilson, L. \$20,000. Evaluating biocontrol of the toxic, invasive weed, houndstongue to improve rangeland quality. David Little Livestock Range Management Endowment. 04/01/01-03/31/02. (A&I)
- Schwarzländer, M. and Prather, T. \$44,950. Evaluation of hoary cress habitats and indigenous insect herbivory, and support of foreign exploration for biological control. Idaho State Dept. of Agriculture. 04/01/01-12/31/01. **(D)**
- §Schwarzländer, M. \$161,403. Biological control of hoary cress: effects of surrogate insect herbivory and interspecific plant competition. USDA CSREES NRI 51.7. 01/01/02-12/31/04. (D)
- Schwarzländer, M. \$8,790. Novel approaches to evaluate the environmental safety of insects used in biological weed control. University of Idaho Seed Grant Program. 07/02/01–06/30/02. (A&I)
- Schwarzländer, M. and Prather, T. \$5,917. Development and production of laminated card sets for the identification of noxious weeds and their biological control agents. University of Idaho Mini IPM Grant Program. 04/01/01-12/31/01. (E)
- Schwarzländer, M. \$4,500. Development and production of laminated card sets for the identification of noxious weeds and their biological control agents. U.S. Forest Service Cost Share Agreement. 04/01/01–06/30/02. (E)

#### **SERVICE:**

# **Major University of Idaho Committee Assignments:**

Member of University of Idaho Faculty Senate, 2017-2024.

Member of Faculty Dismissal Hearing Committee, 2021-2024 (FSH 1640.36).

Member University of Idaho Campus Planning Advisory Committee 2022-2025 (FSH 1640.22)

Associate Director Center for Research on Invasive Species (CRIS) 2019-present.

Director of Graduate Studies (DGS), EPPN Department, 2016-present.

Member University of Idaho Admissions Committee 2020-2023 (FSH 1640.08)

Chair, Interdepartmental motor pool service center, 2015-2022.

Member of University of Idaho University Safety and Loss Control Committee, 2018-2021.

Member of University of Idaho Dismissal Hearings Committee, 2017-2020.

University of Idaho Dismissal Hearing Panel, Member (2019).

Chair of University of Idaho Dismissal Hearings Committee, 2017.

Member of University of Idaho Faculty Affairs Committee, 2015-2018.

Member of University of Idaho Admission Appeal Committee. 2010-2012.

Chair, University of Idaho Admission Appeal Committee 2012-2013.

- Member of College of Agricultural and Life Sciences (CALS) Promotion Tenure Committee 2004 2007.
- Co-Director CRISSP (Center for Research on Invasive Species and Small Population) and 2 of its sub-committees, 2008 2015.
- Academic Advisor of the University of Idaho Aldrich Entomology Club, 2006 present. Coached student teams for 2011 and 2012 Pacific Branch Ent. Soc. America. 'Linnaean Games'; coached students for 2012 Ent. Soc. America Annual Mtg. 'Student Debate.'
- University of Idaho representative for USDA Western Regional Project W1185/W2185/W3185/W4185/W5185 'Biological Control in Plant Pest Management Systems', 2002 present.
- Chair of USDA Western Regional Project W2185 'Biological Control of Plant Pest Management Systems' 2010.
- Member of PSES departmental 'Manis Entomology Laboratory User Committee', 2001 present.

# **Other Committee Assignments:**

- Member of the Idaho State Department of Agriculture State Noxious Weed Advisory Committee 2020-2024.
- President of 501c3 non-profit organization 'Northern Rockies Invasive Plant Council' (NRIPC) www.nripc.org. 2017-present
- Vice President (and founder) of 501c3 non-profit organization 'Northern Rockies Invasive Plant Council' (NRIPC) <a href="https://www.nripc.org">www.nripc.org</a>, 2008 2016.
- Member on the Western Regional Panel (WRP) for Aquatic Invasive Species, a regional committee of the Federal Agency FICMNEW National Aquatic Nuisance Species Task Force. 2008 2011.
- Idaho Weed Control Association Board of Directors representing the University of Idaho. 2009 2010.
- Member of the Biocontrol Task Force (BTF), a committee that develops recommendations for the Idaho Weed Coordinating Committee IWCC. 2001 present.
- Coordinator of the International Hoary Cress Consortium (HCC), a multi-national, multi-agency, and university effort to develop biologically-based management strategies for hoary cress (*Lepidium draba*). 2001 2020.
- Member of the Rush Skeletonweed Task Force (RSWTF), an Idaho-based multi-state, multi-agency coordinating committee that provides coordination of research efforts and management strategies for the integrated management of rush skeletonweed. 2000 present.
- Steering member of the Dyers Woad Task Force, 2009-present.
- Co-coordinator of the Perennial Pepperweed Biocontrol Consortium, 2007-2011.

# **Outreach Service:**

- Montana Weed Control Association Weed Times: 'Update on the Houndstongue Police Car Moths'. Full page article. Volume 30:4. Winter 2012. 960 words.
- Montana Weed Control Association Weed Times 'Native *Gnophaela vermiculata* Caterpillar Discovered on Exotic Houndstongue', Full page article. Volume 30:2. Summer 2012. 720 words.
- Yakima Nation Tribal Journal SIN-WIT-KI 'Locals/staff learn how to use insects to control knapweed on the rez.' Full page article on workshop in Toppenish, WA. Volume 10:2. Summer 2005.
- Interview with Dan Hansen and Shawn Jacobson at a purple loosestrife biological control release site in St. Maries, Idaho for an article entitled 'Alien weeds infest Northwest' published on the front page of the Sunday edition of the Idaho Spokesman-Review, 8 July 2001.
- Provided biological weed control expertise for seven Cooperate Weed Management Areas (Palouse CWMA, Clearwater CWMA, Inland Empire CWMA, Selkirk, and Blaine County CWMA, Utah & Idaho CWMA, and the Tri-State Demonstration Area), 2002 present.

#### Membership in Professional and Scholarly Organizations:

Botanical Society of America (BSA). 2004 - 2009.

British Ecological Society (BES). 1997 - 2009.

Ecological Society of America (ESA) 2004 - 2009.

Entomological Society of America (ESA). 1993 – present.

Entomological Society of Canada (ESC). 1997 – 2009.

Fellow of the Royal Entomological Society. 2000 – present.

International Organization for Biological Control (IOBC). 1997 – 2022.

# Grant Proposal Reviewer and/or Panel Member:

USDA NIFA AFRI, USDA NRI Biological Based Pest Management, NSF Ecology and Evolutionary Biology, EPA STAR Program, USDA Forest Service BCIP, University of Idaho Stillinger Foundation

## **Manuscript Reviewer:**

Biological Invasions, Arthropod Plant Interactions, Journal of Applied Ecology, Oikos, Plant Ecology, Ecology, Annals of the Entomological Society of America, Biocontrol, Biocontrol Science and Technology, Biological Control, Biological Invasions, Canadian Journal of Plant Science, Entomologia Experimentalis et Applicata, Environmental Entomology, Invasive Plant Science and Management, Journal of Applied Entomology, Weed Technology, Insects, Ecological Entomology

# PROFESSIONAL DEVELOPMENT:

Attended the University of Idaho new faculty orientation Attended the University of Idaho IDEAS software training Attended the BANNER financial administration software training