

# CURRICULUM VITA

## **WHITNEY S. CRANSHAW**

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### **Education**

B.A. (1976) Hampshire College, Amherst, Massachusetts  
M.S. (1979) University of Minnesota (Entomology)  
Thesis title - "Contributions to potato pest management in the Red River Valley"  
Ph.D. (1981) University of Minnesota (Entomology; minors in Horticulture, Plant Pathology)  
Dissertation title - "Integrated control of insect contaminants of processed peas"

### **Employment**

1995-present	Professor and Extension Specialist, Colorado State University
1989-1995	Associate Professor and Extension Specialist, Colorado State University
1983-1989	Assistant Professor and Extension Specialist, Colorado State University
1982-83	Extension Specialist-Entomology, University of Minnesota
1981	Instructor, University of Minnesota
1977-80, 1981	Research Assistant-Teaching Assistant, University of Minnesota
1974-75, 1975-76	Technician, Insect Ecology Lab, University of Massachusetts
1973-75	Student Director, Environmental Studies Program, Hampshire College
1975	Fieldman, Biological Field Service Company, Visalia, California

### **General Job Description**

Extension/Research/Teaching position with primary focus on developing applied pest management programs for insect pests of horticultural crops in Colorado, including vegetables, shade trees and shrubs, turf, fruit, and greenhouse crops. Shared Extension responsibilities also include insect diagnostics, household insects, and general entomology queries. On campus teaching includes undergraduate classes related to general entomology, horticultural entomology, and insect diagnostics.

### **On-campus Teaching and Instructional Experience**

Courses currently taught/co-taught on-campus at Colorado State University

**BSPM 102 *Insects, Science and Society*** (Assumed course responsibility in 2002.

Taught fall and spring semesters through 2005; teach fall semesters currently)

**BSPM 303B (1-3) *Horticultural Entomology Lab*** (1984-present, 3 sections taught Fall Semester)

Online courses (*Horticultural Entomology*, a series of three 1-credit courses. 2016-present, taught Spring Semester)

**BSPM356A *Introduction to Horticultural Entomology***

**BSPM356B *Horticultural Entomology-Food Crops***

**BSPM356C Horticultural Entomology-Turf and Ornamental Crops**

Additional on-campus courses with regularly invited lectures

**BSPM302 General and Applied Entomology** - (guest lecturer since 2010, two lectures related to pesticides, Fall semester)

**BSPM303A Agronomic Entomology Lab** (guest lecture for two periods on vegetable insects, alternate Fall semesters)

**BSPM 365 Integrated Forest Health Management** (guest lecturer since 2003, 4-8 lectures/Fall semester)

**BSPM530 Scientific Writing (one lecture on writing for public, Spring semester)**

**BSPM592 Fundamentals of BSPM** (1 lecture, Fall semester, alternate years)

**SOCR424 Topics in Organic Agriculture** (one lecture, IPM, Fall semester)

Courses previously taught at Colorado State University

**BSPM 510 Insect-Plant Disease Relationships** (1984-2004, co-taught with plant pathologist, alternate fall semesters. Course discontinued with retirement of co-instructor.)

Courses taught as Instructor at University of Minnesota (St. Paul Campus, 1981-1983)

*Economic Entomology*

*Insects in Relation to Plant Disease*

Teaching Assistant at University of Minnesota

*Economic Entomology*

*Introduction to Entomology*

Teaching Associate, Hampshire College (1973-75)

*The Bee Dance Language Controversy*

*Beekeeping*

*The Living Insect*

**Graduate Students with Completed Program, Primary Advisor/Co-advisor**

***Students with Dissertation/Thesis Program (Plan A)***

**Sitz, Rachael.** (co-advisor with Jane Stewart) 2017. Information on emergent insect associated tree diseases including epidemiological studies of drippy blight disease of oak and thousand cankers disease of walnut. Ph.D. Dissertation.

**Ewals-Strain, Brandon.** 2017. Studies on the management of the swallow bug, *Oeciacus vicarius* Horvath (Hemiptera: Cimicidae) and survival off its avian host. M.S. Thesis.

**Sitz, Rachael.** 2013. Management options for the walnut twig beetle, *Pityophthorus juglandis* Blackman, vector of the fungal canker pathogen *Geosmithia morbida*. M.S. Thesis.

**Utley, Curtis** (co-advisor with Ned Tisserat). 2013. The biology of *Geosmithia morbida* and susceptibility of walnut and hickory species to thousand cankers disease. M.S. Thesis.

**Peachey, Emily** (co-advisor with Ned Tisserat). 2012. Studies on the walnut twig beetle (WTB) *Pityophthorus juglandis* in relation to its association with *Geosmithia morbida*, its survival in felled logs, and its sensitivity to temperature extremes. M.S. Thesis.

**McEwen, Crystal.** 2011. Two entomological studies: 1. The potential of methyl jasmonate applications as a pest management method on cruciferous crops; 2. Contributions to the biology of *Disholcaspis quercusmamma* (Walsh) (Hymenoptera: Cynipidae). M.S. Thesis.

**Camper, Matt.** 2007. Individual potato cultivar response to natural infestations of *Bactericera cockerelli* (Sulc) including studies on yield fluctuations produced by differing treatment schedules. M.S. Thesis.

- Colvin, Bennett.** 2007. Developing methods for managing two introduced insects affecting vegetable and garden crops in eastern Colorado: European earwig, *Forficula auricularia* L. (Dermaptera: Auricularidae) and red lettuce aphid, *Nasonovia ribes-nigri* (Mosley) (Hemiptera: Aphididae). M.S. Thesis.
- Owens, Jeff.** 2007. Striped cucumber beetle, *Acalymma vittatum* (F.) (Coleoptera: Chrysomelidae) in Northern Colorado: Trapping and monitoring methods M.S. Thesis.
- Mahaffey, Linda.** 2006. Diversity, seasonal biology and IPM of onion-infesting thrips in Colorado. M.S. Thesis, Colorado State University. 61 pp.
- Walker, Gregory.** 2006. Developing improved baiting systems to manage the pavement ant, *Tetramorium caespitum* (L.) M.S. Thesis, Colorado State University. 75 pp.
- Sever, Andrea.** 2005. Shade tree insect pest management studies: I. Evaluation of non-target effects of pesticides on arthropods; II. Biology of two emergent insect pests of oak. M.S. Thesis, Colorado State University. 57 pp.
- Sally McElwey.** 2004. Investigations into possible causes of overwintering mortality of Colorado honey bees. M.S. Thesis, Colorado State University.
- Demirel, Nihat.** 2003. Integrated Pest Management Studies of the insects affecting oilseed Brassicas in Colorado. Ph.D. Dissertation, Colorado State University. 266 pp.
- Mannix, Loretta.** 2001. Evaluation of green lacewing (Neuroptera: Chrysopidae) for control of woody plant pests. M.S. Thesis, Colorado State University. 75 pp.
- Wilson, Karen Kramer.** 2001. Seasonal biology and control of clover mite, *Bryobia praetiosa* Koch, in Colorado turfgrass. M.S. Thesis, Colorado State University. 67 pp.
- Al-Doghairi, Mohammed A.** 2000. Pest management tactics for the western cabbage flea beetle (*Phyllotreta pusilla* Horn) on brassica crops. Ph.D. Dissertation, Colorado State University. 166 pp.
- Al-Jabr, Ahmed.** 1999. Integrated pest management of tomato/potato psyllid, *Paratrioza cockerelli* (Sulc) (Homoptera: Psyllidae) with emphasis on its importance to greenhouse tomatoes. Ph.D. Dissertation, Colorado State University. 93 pp.
- Gerace, Daniel.** 1998. Studies in Integrated Pest Management of some Colorado bedding plants. M.S. Thesis, Colorado State University. 79 pp.
- Bishop, R. Jason.** 1998. Seasonal flight phenology and trapping methodology studies of the dusky sap beetle, *Carpophilus lugubris* Murray (Coleoptera: Nitidulidae), in western Colorado sweet corn, *Zea mays* L. M.S. Thesis, Colorado State University. 74 pp.
- Demirel, Nihat.** 1998. Studies in development of pest management practices for some insects affecting garden plants in Larimer County, Colorado. M.S. Thesis, Colorado State University. 69 pp.
- Casey Daniel Sclar.** 1997. Ph.D. Dissertation, Colorado State University. The spider mites of Colorado: Biology and management on landscape plants. 96 pp.
- Dayna D. Cooper.** 1995. Urban conifer scale pests of Colorado's northeastern Front Range. M.S. Thesis. 101 pp.
- Saleh Aldosari.** 1995. Development of an IPM system for onion thrips (*Thrips tabaci* Lindeman) as a pest of bulb onions. Ph.D. Dissertation. 124 pp.
- Mohammed Al-Doghairi.** 1995. Status on the use of supplemental food sources to increase natural enemy activity against Colorado pests. M.S. Thesis. 112 pp.
- Casey Daniel Sclar.** 1995. M.S. Thesis. A re-evaluation of systemic insecticides for the control of woody plant arthropod pests. 152 pp.
- Thomas B. Eckberg.** 1993. M.S. Thesis. Observations on the biology and management of four

landscape pests of the Front Range of Colorado.

**Rick J. Zimmerman.** 1991. Ph.D. Dissertation. Contributions toward an integrated pest management system for the elm leaf beetle, *Xanthogaleruca luteola* (Muller) (Coleoptera: Chrysomelidae).

**Rella L. Abernathy.** 1991. M.S. Thesis. Investigations into the nature of the potato psyllid toxin.

**Blair Shean.** 1989. M.S. Thesis. Evaluation of two hymenopteran parasitoids for integrated control of *Myzus persicae* in greenhouses.

**Robert W. Hammon.** 1989. M.S. Thesis. Suppression of *Myzus persicae* in the San Luis Valley.

**Rick J. Zimmerman.** 1988. M.S. Thesis. Entomogenous nematodes for use in turf IPM systems.

**David J. Liewehr.** 1988. M.S. Thesis. Cultural practices of potatoes: Effects on alate aphids and other arthropods.

***Students without Thesis Program (Plan B)***

**Zana Jevremovic** (1999)

### **Present Graduate Students (Primary Advisor)**

Melissa Schreiner (M.S.)

Zachary Longtine (M.S.)

Rasha Alakeel (Ph.D.)

### **Advising (other)**

Faculty Advisor for CSU students (12) in a Study Abroad semester at Lincoln University, New Zealand (February-June, 2012)

### **Honors, Awards, Recognitions**

2013 *Distinguished Achievement Award in Horticultural Entomology.* Entomological Society of America. Presented at Annual Meeting, Austin TX

2009 *Recognition Award for Urban Entomology.* Entomological Foundation/SC Johnson. Presented at the Annual Meeting of the Entomological Society of America. Indianapolis, IN.

2007 *Distinguished Alumni Award,* Department of Entomology, University of Minnesota

2006 Featured in "One on One" column of *The American Gardener*, March/April 2006 Edition, reviewing work on garden IPM

2006 A colleague (Boris Kondratieff) honorarily named a new species of stonefly *Perlesta cranshawi*.

2006 *Waterpik Excellence in Education Award* (presented at BYU-CSU Football Game)

2006 *Best Teacher,* Colorado State University Alumni Association

2005 *BCE Entomological Project Award, NCB-ESA.* This was given for the book *Garden Insects of North America.*

2005 Garden Writers of America, 2005 Bronze Award/Technical Book Writing

2005 Finalist, 2004 Colorado Book Awards (Educational Non-fiction)

2004 *MVP Award, Colorado Association of Lawn Care Professionals.* For "a dedicated time commitment beyond the call of duty and outstanding effort in the betterment of the professionalism and goals of CALCP"

2002 Featured "Gardening Guru" for August, National Gardening Association

<http://www.nationalgardening.com/bgcnews/Aug02/index.htm>

2001 Received very favorable review of *Pests of the West* in the Winter 2001 *American Entomologist*.

2001 Received very favorable review of *Insects and Diseases of Woody Plants in the Central Rockies* (*Ann. Entomol. Soc. Am.* 94(6): 959-960.)

2000 Featured in a full-length article of the front page of Section F of the July 22 *Denver Post*, entitled "A Passion for Pests".

1998 Featured as one of three of "The New Entomologists" in the June/July issue of *Organic Gardening* magazine.

1999 *Distinguished Achievement Award in Extension, North Central Branch, Entomological Society of America*. This is in recognition for achievements in Extension, particularly emphasizing efforts of regional value.

1999 *Distinguished Achievement Award in Extension, Entomological Society of America*

1996 *Turf Professional of the Year*, Rocky Mountain Regional Turfgrass Association

This award is given annually, during the annual December conference, to recognize an individual who has contributed to the turfgrass industries of the Rocky Mountain States.

1995 *NACTA/Shepardson Meritorious Teaching Award*, College of Agriculture

This award is given annually to a faculty member in the College of Agriculture who has a sustained career of teaching in a manner that has shown innovation and excellence.

1995 Co-authored book *Bagging Big Bugs* was given an Award of Excellence by the Young Entomologist's Society as being one of the "World's Best Books on Minibeasts"

1992 *Person of the Year*, Green Industries of Colorado. This award is given each year in recognition of an individual who has made outstanding contributions to the Green Industries of Colorado and is presented at the Colorado Garden and Home Show.

1990 *F.A. Anderson Award for Distinguished Service*, Colorado Cooperative Extension.

This award is given each year to an Extension Specialist "in recognition of superior service to the people of Colorado through Extension Education"

1989 *Award for Arboriculture Research*, International Society of Arboriculture Award presented at the Annual Conference (St. Charles, IL) "In recognition of research significant to the improvement of the profession and continued dedication to scientifically based tree care." Award given to one individual a year.

1988 Featured in an article in *Organic Gardening* magazine (September), entitled "An Insect Einstein". This was rather a light-hearted feature article that emphasized some of my work on "alternative" pest controls. **Note:** This article later led to several radio interviews (including Scott Simon of Weekend Edition/National Public Radio), newspaper, and magazine articles. It also was the impetus to my being asked by Fulcrum Publishing to write *Pests of the West*.

1979 *Graduate Student Teaching Award*, North Central Branch, Entomological Society of America

### **Invited Extension Presentations**

Invited Extension Programs are presented to about 30-50 different audiences annually. These are a mixture of groups that typically include commercial vegetable growers, turf and landscape plant care professionals, Master Gardeners, biology teachers, nurseries, various horticultural-related societies, and others with interest in entomology.

### **Listserv Bulletin Boards Established and Maintained**

**PestTalk** - a discussion group focusing on insect, disease and cultural problems in lawns and gardens of Colorado and adjacent states. Started in 1997, there are presently approximately 300 participants.

**OrnaEnt** (established with Mike Merchant, Texas A&M) - a national discussion group focusing on insect and mite problems affecting ornamental (broad sense) plants. Started in 2000, there are presently approximately 250 participants.

**ThousandCankers** – a discussion group to exchange information on thousand cankers disease of walnut. Started in 2012, there were 90 participants in the 2nd year. This listserv has been discontinued.

### **Websites Established and Maintained**

**Colorado Insect information Website** <http://bspm.agsci.colostate.edu/outreach-button/insect-information/> This website was established to as place to bring together various sources of information, most all generated within the Department, related to arthropods in Colorado. The single largest section is *Arthropods of Colorado* <http://bspm.agsci.colostate.edu/outreach-button/insect-information/arthropods-of-colorado/> which contains about ninety 1-5 page sheets on various arthropods of Colorado, most of which have special public interest. These are placed alongside the ca 90 formal Extension Fact Sheets on insects. Publications accessible elsewhere within the website run from a bulletin on *Insects of Colorado Water Gardens*, to lists of biological control organisms, to “Wood Boring Insects of Ash” to “Mystery Bites and Itches”... Recent outreach presentations are posted at the end of the website.

**Hemp Insect Website** <http://hempinsects.agsci.colostate.edu/>

Established in June 2017, this site focuses on insects found in hemp. The largest section includes a series of sheets on the various insects found on hemp in Colorado. Images of insects found on hemp elsewhere in North America are on the “Got Bugs?” page. This is a very active site, still evolving, with many materials being regularly revised with new information.

### **Books**

#### ***Books, Privately Printed***

Cranshaw, W. and D. Shetlar. 2017. *Garden Insects of North America, 2<sup>nd</sup> Edition*. Princeton University Press. Princeton, N.J. 704 pp.

Cranshaw, W. and R. Redak. 2013. *Bugs Rule! An Introduction to the World of Insects*. Princeton University Press. Princeton, N.J. 480 pp.

Cranshaw, W.S. and B.C. Kondratieff. 2006. *Guide to Colorado Insects*. Westcliffe Publishing. Englewood, CO. 232 pp.

Cranshaw, W. 2004. *Garden Insects of North America*. Princeton University Press. Princeton, NJ. 656 pp.

Cranshaw, W.S. 1998. *Pests of the West, Revised*. Fulcrum Publishing. Golden, CO. 248 pp.

Cranshaw, W.S. and B.C. Kondratieff. 1995. *Bagging Big Bugs*. Fulcrum Publishing. Golden, CO. 324 pp.

Cranshaw, W.S. 1992. *Pests of the West*. Fulcrum Publishing. Golden, CO. 275 pp.

#### ***Books, Government Printing***

Kondratieff, B. and W. Cranshaw. 2007. *Common Insects, Spiders, Ticks, and Scorpions of Fort Sill, Oklahoma*. United States Government Printing Office 653-331. 85 pp.

#### ***Colorado State Extension Bulletins***

Cranshaw, W., W. Jacobi, D. Leatherman, and N. Tisserat. 2014. *Insects and Diseases of Woody*

*Plants in Colorado*. Colorado State University Extension Bulletin 506A. 322 pp.  
Cranshaw, W.S. and C.R. Ward. 1996. Turfgrass Insects in Colorado and Northern New Mexico. *Colorado State Cooperative Extension Publ. 560A*. 38 pp.  
Cranshaw, W.S., S. Armbrust, M. Brewer, and S. Lejeunesse. 1994. Household Insects of the Rocky Mountain States. *Colorado State University Extension Bulletin 557A*. 90 pp.

**Publications in Professional/Refereed Journals (2010-present publication)**

Cranshaw, W. And M. Camper. 2010. Pest Control Industry: An assessment of current concerns and needs in Colorado and Wyoming. Colorado Agricultural Experiment Station Bulletin TB-10-1 5 pp.

Cranshaw, W. and N. Tisserat. 2010. Thousand Cankers Disease: A Recently Recognized Threat to North American Black Walnut. *Arborist News* 19 (1): 52-56.

Colvin, B. & Cranshaw, W. (2010) Comparison of over-the-counter insecticides for managing the European earwig, *Forficula auricularia* L. (Dermaptera: Forficulidae). *Southwestern Entomologist*, 35, 69–74.

Tisserat, N., Cranshaw, W., Putnam, M. L., Pscheidt, J., Leslie, C. A., Murray, M., Hoffman, J., Barkley, Y., Alexander, K., and Seybold, S. J. 2011. Thousand cankers disease is widespread in black walnut in the western United States. *Plant Health Progress* doi: 10.1094/PHP-2011-0630-01-BR

Cranshaw, W.S., H.J. Larsen, Jr. and R.J. Zimmerman. 2011. Notes on fruit damage by the European paper wasp, *Polistes dominula* (Christ) (Hymenoptera: Vespidae). *Southwestern Entomologist* 36(1): 103-105. doi: <http://dx.doi.org/10.3958/059.036.0110>

Cranshaw, W. 2011. Recently recognized range extensions of the walnut twig beetle, *Pityophthorus juglandis* Blackman (Coleoptera: Curculionidae: Scolytinae), in the western United States. *The Coleopterists Bulletin* 65(1) 48-49. doi: <http://dx.doi.org/10.1649/0010-065X-65.1.48>

Cranshaw, W. 2011. A Review of Nuisance Invader Household Pests of the United States. *American Entomologist* 57(3): 165-169.

Sever, A., W. Cranshaw and R. Brudenell. 2012. *Agrilus quercicola* (Fisher) (Coleoptera: Buprestidae), the Gambel oak borer, as a pest of *Quercus* spp. *Southwestern Entomologist* 37(2):147- 150. doi: <http://dx.doi.org/10.3958/059.037.0207>

Looney, C., L. M. Humble and W. Cranshaw. 2012. *Orchestes alni* (L.) (Coleoptera: Curculionidae): New Records from Western North America with Notes on Parasitoids. *The Coleopterist's Bulletin* 66(1):63-66. doi: <http://dx.doi.org/10.1649/072.066.0115>

Utley, C., Nguyen, T., Roubtsova, T., Coggeshall, M., Ford, T. M., Grauke, L. J., Graves, A. D., Leslie, C. A., McKenna, J., Woeste, K., Yaghmour, M. A., Cranshaw, W., Seybold, S. J., Bostock, R. M., and Tisserat, N. 2013. Susceptibility of walnut and hickory species to *Geosmithia morbida*. *Plant Dis.* 97: 601–607. <http://dx.doi.org/10.1094/PDIS-07-12-0636-RE>

Luna, E.K., R.A. Sitz, W.S. Cranshaw, and N.A. Tisserat. 2013. The effect of temperature on survival of *Pityophthorus juglandis* (Coleoptera: Curculionidae). *Environ. Entomol.* 42(5): 1085–1091. <http://dx.doi.org/10.1603/EN13151>

Luna, E., W. Cranshaw, and N. Tisserat. 2014. Attraction of walnut twig beetle *Pityophthorus juglandis* (Coleoptera: Curculionidae) to the fungus *Geosmithia morbida*. *Plant Health Progress* 01/2014; DOI: 10.1094/PHP-RS-14-0001

Marcelo M. Zerillo, Jorge Ibarra Caballero, Keith Woeste, Andrew D. Graves, Colleen Hartel, Jay W. Pscheidt, Jadelys Tonos, Kirk Broders, Whitney Cranshaw, Steven J. Seybold, Ned

- Tisserat. 2014. Population Structure of *Geosmithia morbida*, the Causal Agent of Thousand Cankers Disease of Walnut Trees in the United States. PLoS One Published: November 13, 2014. DOI: 10.1371/journal.pone.0112847
- McEwen, C, S. Digweed, J.A. Nicholls and W. Cranshaw. 2014. Description and biology of the sexual generation of *Disholcaspis quercusmamma* (Walsh and Riley) (Hyemoptera: Cynipidae), with notes on associated parasitoids. Proceedings of the Entomological Society of Washington 116(3):294-310. doi: <http://dx.doi.org/10.4289/0013-8797.116.3.294>
- Schwartz, H.F., D. H. Gent, S. M. Fichtner, K. Otto, C. O. Boateng, S. Szostek, W. S. Cranshaw, and L. A. Mahaffey. 2014. *Thrips tabaci* (Thysanoptera: Thripidae) and Iris yellow spot virus Associated with Onion Transplants, Onion Volunteers, and Weeds in Colorado. Southwestern Entomologist Vol. 39, Issue 4, pg(s) 691-704 doi: 10.3958/059.039.0401
- Sitz, R.A., Utley, C., Hall, A., Tisserat, N., and W.S. Cranshaw. 2017. Trapping the walnut twig beetle to determine flight patterns in Colorado. Southwestern Entomologist 42(2): 347-356. <https://doi.org/10.3958/059.042.0204>
- Sitz, R.A., Luna, E.K., Tisserat, N.A., and W.S. Cranshaw. 2015. An annotated bibliography of thousand cankers disease. Including general reports related to this disease, information on the walnut twig beetle *Pityophthorus juglandis* Coleoptera: Curculionidae (Scolytinae), and the associated fungus *Geosmithia morbida*. CSU AES TB 15-1.
- Sitz, R.A., Luna, E.K., Tisserat, N.A., Caballero, J.I., Cranshaw, W.S. and J.E. Stewart. 2017. Virulence of genetically distinct *Geosmithia morbida* isolates to black walnut and their response to co-inoculation with *Fusarium solani*. Plant Dis. 101(1):116-120. <https://doi.org/10.1094/PDIS-04-16-0535-RE>
- Sitz, R.A., Zerillo, M.M., Snelling, J., Caballero, J.I., Alexander, K., Nash, K., Tisserat, N.A., Cranshaw, W.S., and J.E. Stewart. 2017. Drippy blight disease of red oaks in Colorado caused by *Allokermes* sp. and *Lonsdalea quercina* subsp. *quercina*. Arboriculture and Urban Forestry **In Review (November 2017)**: Sitz, R.A., and W.S. Cranshaw. Life history of *Allokermes galliformis* (Hemiptera:Kermesidae) in Colorado. Ann. Entomol. Soc. Am.

### Photographs Featured in Publication

2009. A photograph of a trans-genus pairing of *Lygaeus kalmii* and *Oncopeltus fasciatus* was featured “What is This?” photograph in the Winter 2009 issue of *American Entomologist*
2007. A series of photographs documenting the eclosion of the robber fly *Diogmites augustipennis* was published in the Spring 2007 issue of *American Entomologist*

### Book Chapters (Post-2000)

- Cranshaw, W.S. 2001. Psyllid Yellows. pp. 73-74 in *Compendium of Potato Diseases and Pests, Second Edition*. eds. W.R. Stevenson, R. Loria, G.D. Franc, D.P. weingartner. The American Phytopathological Society. St. Paul, MN. 106 pp.
- Cranshaw, W.S., W.D. Hutchison and E.B. Radcliffe. 2001. Insect Pests of Pea. pp. 40-47 in *Compendium of Pea Diseases and Pests, Second Edition*. eds. J.M. Kraft and F.L. Pflieger. The American Phytopathological Society. St. Paul, MN. 67 pp.
- Cranshaw, W.S. 2004. Entries on: Crawler, Frass, Honeydew, Leafroller, Phytotoxemia, Shade Tree Arthropods and Their Management. in *Encyclopedia of Entomology*. ed. J.L. Capinera. Kluwer Academic Publishers. Dordrecht, Netherlands. 2580 pp.
- Cranshaw, W.S. 2004. Chapter 9. Classes of Pesticides Used in Landscape/Nursery Pest Management pp. 42-44. in *IPM (Integrated Pest Management) of Midwest Landscapes*. eds. V.

Krischik and J. Davidson. Minnesota Agricultural Experiment Station SB-07465. 316 pp.

Cranshaw, W.S. 2004. Chapter 10. Relative Hazards of Turf and Ornamental Pesticides to Non-target Species. pp. 45-48. in *IPM (Integrated Pest Management) of Midwest Landscapes*. eds. V. Krischik and J. Davidson. Minnesota Agricultural Experiment Station SB-07645. 316 pp.

Cranshaw, W., E. Grafius, T-X Liu, B. Nault, and D. Riley. 2005. Chapter 11. Onions in *Vegetable Insect Management*. ed. R. Foster and B. Flood. Meister Publishing Co. Willoughby, Ohio. 264 pp.

Cranshaw, W.S. 2008. II. Pests. in *Compendium of Onion and Garlic Diseases and Pests*, 2<sup>nd</sup> Edition. Ed. H.F. Schwartz and S.K. Mohan. APS Press. St. Paul, MN. 127 pp.

### **Presentations/Posters at Professional Meetings (2013-present)**

Cranshaw, W. 2017. Hemp insect pest management: Needs and challenges. Invited symposium speaker. Annual Meeting, Entomological Society of America, Denver, CO.

Peirce, E., R. Sitz, M. Schreiner, W. Burns, and W. Cranshaw. 2017. The natural enemy complex associated with European elm scale in Colorado, with emphasis on associated parasitoids. Poster. 65<sup>th</sup> Annual Meeting, Entomological Society of America, Denver, CO.

Schreiner, M., Wendlin Burns, Erika Peirce, Larry Hurd, and W. Cranshaw. 2017. Identifying rose cultivars for the post-Japanese beetle landscape. Poster. 65<sup>th</sup> Annual Meeting, Entomological Society of America, Denver, CO.

Longtine, Z., W. Cranshaw, B. Kondratieff, M. Uchanski, M. Schreiner, W. Burns. 2017. Insect faunal survey of three non-native mustards as overwintering habitat for cruciferous insects. Poster. 65<sup>th</sup> Annual Meeting, Entomological Society of America, Denver, CO.

Alakeel, R. and W. Cranshaw. 2017. Investigations into some potential risks to non-target species from emerald ash borer applied insecticides. Poster. 65<sup>th</sup> Annual Meeting, Entomological Society of America, Denver, CO.

Sitz, R., J. Stewart, and W. Cranshaw. 2017. An Overview of Drippy Blight: An Emergent Insect Associated Disease of Red Oaks. Poster. 65<sup>th</sup> Annual Meeting, Entomological Society of America, Denver, CO.

Cranshaw, W. 2017. Cannabis pest management: A perspective from Colorado. Invited symposium speaker. Annual Meeting, American Phytopathological Society. August 5-9. San Antonio, TX.

Cranshaw, W. 2016. Insect management considerations in hemp production. Invited symposium speaker. Soil and Crop Society, Industrial Hemp Conference. July 23. 2016. Denver, CO

Alakeel, R. and W. Cranshaw. 2015. Use of ash pollen by honey bees in urbanized areas of Colorado. 63<sup>rd</sup> Annual Meeting, Entomological Society of America. Minneapolis, MN.

Ewals-Strain, B. and W. Cranshaw. 2015. Use of bed bug traps to capture other cimicids and blood feeding mites found in buildings. 63<sup>rd</sup> Annual Meeting, Entomological Society of America. Minneapolis, MN.

Sitz, R. and W. Cranshaw. Life history information on the *Allokermes* sp. associated with drippy blight disease of red oaks. 63<sup>rd</sup> Annual Meeting, Entomological Society of America. Minneapolis, MN.

Cranshaw, W. 2014. Evaluation of trapping for use in managing western yellowjacket and other pest vespids in northern Colorado. 62<sup>nd</sup> Annual Meeting, Entomological Society of America. Portland, OR.

Sitz, R., P. Forrence and W. Cranshaw. 2014. Evaluating the efficacy of several insecticide on the neonicotinoid-resistant European elm scale. 62<sup>nd</sup> Annual Meeting, Entomological Society of

America. Portland, OR.

Sitz, R., E. Luna, N. Tisserat and W. Cranshaw. 2013 Sanitation measures to control walnut twig beetle (*Pityphthorus juglandis*) emergence from felled logs. 61st Annual Meeting, Entomological Society of America. Austin, TX.

Hardin, J., W. Cranshaw and S. Szostek. 2013 Thrips associated with the environs of onion fields in Colorado. 61st Annual Meeting, Entomological Society of America. Austin, TX.

Cranshaw, W., and M. Camper. 2013 Lepidoptera-Not! A survey of mottephobia incidence and attitudes towards moths and butterflies. 61st Annual Meeting, Entomological Society of America. Austin, TX.

### **Images for Public Use Submitted and Posted at BugWood/IPM Images**

For over a decade, photos have been submitted to the Bugwood/IPM Images website so that they can be used for educational purposes. As of 19 November 2017 I have 4510 images currently listed at the site, the great majority of which involve arthropods or injuries produced by arthropods.

### **Extension, Popular Press Publications (2000-present)**

Cranshaw, W., D. Leatherman, W. Jacobi and L. Mannix (coordinators). 2000. Insects and Diseases of Woody Plants of the Central Rockies. *Cooperative Extension Bulletin 506A*. 283 pp.

Cranshaw, W. 2001. Lady Beetles. *Colorado State University Fact Sheet 5.594*. 4 pp.

Cranshaw, W. 2002. Mantids of Colorado. *Colorado State University Fact Sheet 5.510*. 4 pp.

Cranshaw, W. 2002. Hornworms and Hummingbird Moths. *Colorado State University Fact Sheet 5.517*. 4 pp.

Peairs, F.B., W.S. Cranshaw and P.E. Cushing. 2002. Spiders in the Home. *Colorado State University Fact Sheet 5.512*. 6 pp. *Colorado State University Fact Sheet 5.512*. 6 pp.

Leatherman, D. and W. Cranshaw. 2003. Ips Beetles. *Colorado State University Fact Sheet 5.558*. 3 pp.

Cranshaw, W. 2003. Managing Houseplant Pests. *Colorado State University Fact Sheet 5.595*. 8 pp.

Cranshaw, W. 2003. Miller Moths. *Colorado State University Fact Sheet 5.596*. 4 pp.

Cranshaw, W. 2003. Indian Meal Moth. *Colorado State University Fact Sheet 5.597*. 3 pp.

Cranshaw, W. 2003. Clothes Moth: Identification and Control in the Home. *Colorado State University Fact Sheet 5.597*. 4 pp.

Cranshaw, W. and R. Wilson. 2004. Fleas and Plague. *Colorado State University Fact Sheet 5.600*. 3 pp.

Cranshaw, W. 2004. Landscape and Nursery Insect Management Recommendation Guide. *Colorado State Extension Bulletin XCM-38*. 88 pp.

Cranshaw, W., D. Leatherman, W. Jacobi and L. Mannix (coordinators). 2004 (revision). Insects and Diseases of Woody Plants of the Central Rockies. *Cooperative Extension Bulletin 506A*. 292 pp.

Cranshaw, W. 2005. Poplar twiggall fly affects aspen. *American Nurseryman* 201 (Feb 15): 8

Cranshaw, W. 2007. Japanese Beetle. *Colorado State University Extension Fact Sheet 5.601*. 4 pp.

Cranshaw, W. 2007. Springtails. *Colorado State University Extension Fact Sheet 5.602*. 2 pp.

Cranshaw, W. 2007. False Chinch Bugs. *Colorado State University Extension Fact Sheet 5.603*. 2 pp.

Cranshaw, W. 2007. Pigeon Tremex and the Giant Ichneumon Wasp. *Colorado State University Extension Fact Sheet 5.604*. 2 pp.

Cranshaw, W. 2007. Western Widow. *Colorado State University Extension Fact Sheet 5.605*. 4 pp.

Cranshaw, W. 2007. White Pine Weevil. *Colorado State University Extension Fact Sheet 5.606*. 4 pp.

Cranshaw, W. and R. Hammon. 2008. Grasshopper Control in Gardens and Small Acreages. *Colorado State University Extension Fact Sheet 5.536*. 4 pp.

Cranshaw, W. 2008. Brown Recluse Spiders in Colorado: Recognition and Spiders of Similar Appearance. *Colorado State University Extension Fact Sheet 5.607*. 4 pp.

Cranshaw, W. 2008. Leafhoppers on Lawns. *Colorado State University Extension Fact Sheet 5.608*. 2 pp.

Cranshaw, W. 2008. Weird Worms: Horsehair worms and the grasshopper nematode. *Colorado State University Fact Sheet 5.609*

Cranshaw, W. 2008. Squash Bugs: Management in home gardens. *Colorado State University Fact Sheet 5.609*

Cranshaw, W. 2008. European Paper Wasp. *Colorado State University Fact Sheet 5.611*.

Cranshaw, W. and N.A. Tisserat. 2008. Walnut beetle and the 1000 cankers disease. Northern Nutgrowers Association. <http://www.nutgrowing.org/feature1.htm>

Cranshaw, W. And R. A. Cloyd. 2009. Fungus Gnats as Houseplant and Indoor Pests. *Colorado State University Extension Fact Sheet 5.584*.

Peairs, F. and W. Cranshaw. 2009. *Bug Mugs*. Project of the Colorado State Extension Entomology Program. <http://bspm.agsci.colostate.edu/files/2013/03/Bug-Mugs-Binder.pdf>

Cranshaw, W. and J. Hardin. 2009. Invasive Species Teacher's Guide. Ag in the Classroom/Colorado Reader. September 2009.

Cranshaw, W. 2013. Japanese Beetle. Colorado State Extension Fact Sheet 5.601. <http://www.ext.colostate.edu/pubs/insect/05601.html>

Cranshaw, W. and B. Hammon. 2013. Codling Moth: Control in Home Plantings. Colorado State Extension Fact Sheet 5.613 <http://www.ext.colostate.edu/pubs/insect/05613.html>

Cranshaw, W., W. Jacobi, D. Leatherman, and N. Tisserat. 2014. *Insects and Diseases of Woody Plants in Colorado*. Colorado State University Extension Bulletin 506A. 322 pp.

Cranshaw, W. 2014. Lilac/Ash Borer: A common wood borer on Colorado's street trees. Colorado State University Extension Fact Sheet 5.614 <http://extension.colostate.edu/docs/pubs/insect/05614.pdf>

### **Miscellaneous Assignments Related to Profession**

Entomological Society of America Common Names Committee (1999-2001, 2008-2015, 2016-present; chairman 2011, 2014-2015)

Board of Advisors, Entomological Foundation (2007-2011)

Chairman, NCR-98 (Woody Plants) (1987), Host (1991)/NCR-196 Co-host 2007

Department of Entomology Advisory Committee (1986-87, 1990-91)

Department of Bioagricultural Sciences and Pest Management Executive Committee (1999-2001, 2008-2011)

Board of Directors, Colorado Association of Lawn Care Professionals (1987-1993)

SubCommittee Chairman (Vegetables, Sugarbeets), NAPIAP Benefits Assessment Review of Aldicarb Use in Agriculture (1988-90)  
IR-4 advisory committee member, vegetables (1989), ornamentals (1990)  
Committee member, Organic Potato Pest Management Strategic Plan, Western Region IPM project for USDA Office of Pest Management Policy (2008)  
CSRS Review Panel Member, Washington State University, Department of Entomology (1993)  
Contracted to write report on use of biologically derived technologies for managing pests in urban and suburban environments, US Congress Office of Technology Assessment, August 1994

## OLDER ACTIVITIES

### **Publications in Professional/Refereed Journals (prior to 2010 publication)**

- Barbosa, P., E.A. Frongillo and W.S. Cranshaw. 1979. Orientation of field populations of *Brachymeria intermedia* (Hymenoptera: Chalcididae) to host and host habitat cues. *Entomophaga* 23: 63-7.
- Barbosa, P., J. Greenblatt, W. Withers, W. Cranshaw and E.A. Harrington. 1979. Host-plant preferences and their induction in larvae of gypsy moth, *Lymantria dispar*. *Ent. Exp. Appl.* 25: 180-8.
- Cranshaw, W.S. and E.B. Radcliffe. 1980. Effect of defoliation on yield of potatoes. *J. Econ. Entomol.* 73: 131-4.
- Barbosa, P., W.S. Cranshaw and J.A. Greenblatt. 1981. Influence of food quality on polymorphic dispersal behaviors in the gypsy moth, *Lymantria dispar*. *Can. J. Zool.* 59: 293-6.
- Zalom, F.G. and W.S. Cranshaw. 1981. Effects of an aluminum foil mulch on parasitism and fecundity of apterous *Myzus persicae* (Homoptera: Aphididae). *Great Lakes Entomologist* 14: 171-6.
- Radcliffe, E.B., R.E. Cancelado and W.S. Cranshaw. 1981. Establishing action thresholds for insect pests. Chap. 31, Integrated plant protection for potatoes. *Proc. IXth Int. Congr. Plant Protection. II*: 477-80.
- Cranshaw, W.S. 1984. Effect of a hay mulch and of a companionate planting on cabbage pest populations. *Great Lakes Entomol.* 17: 9-12.
- Cranshaw, W.S. and E.B. Radcliffe. 1984. The influence of cultivar and host plant age on European corn borer (Lepidoptera: Pyralidae) infestation in snap beans. *J. Econ. Entomol.* 77: 374-6.
- Cranshaw, W.S. and E.B. Radcliffe. 1984. Insect Contaminants of Minnesota Processed Peas. *Univ. Minn. Tech. Bull.* AD-TB-2211.
- Cranshaw, W. S. and R. J. Dufault. 1985. Effect of artificial defoliation on broccoli yield. *Great Lakes Entomol.* 18: 55-7
- Cranshaw, W.S. 1985. Clover root curculio injury and abundance in Minnesota alfalfa of different stand age. *Great Lakes Entomol.* 18: 93-5.
- Capinera, J.L., W.S. Cranshaw and H.G. Hughes. 1986. Suppression of raspberry crown borer, *Pennisetia marginata* (Harris) (Lepidoptera: Sesiidae) with soil applications of *Steinernema feltiae* (Rhabditida: Steinernematidae). *J. Invert. Pathol.* 48: 257-8.
- Krysan, J.L., D.E. Foster, T.F. Branson, K.R. Ostlie and W.S. Cranshaw. 1986. Two years before the hatch: Rootworms adapt to crop rotation. *Bull. Entomol. Soc. Am.* 32: 250-53.
- Frankie, G.W., J.W. Brewer, W. Cranshaw, and J.F. Barthell. 1987. Abundance and natural

enemies of the spindle gall midge, *Pinyonia edulicola* Gagne, in natural and urban stands of Pinyon pine in Colorado. J. Kansas Entomol. Soc. 60: 133-44.

Meyer, W.L., W.S. Cranshaw, and T.D. Eichlin. 1988. Flight patterns of clearwing borers in Colorado based on pheromone trap captures. Southwestern Entomologist 13: 39-46.

Cranshaw, W.S. and M.K. Thornton. 1988. Effects of soil systemic insecticides on potato growth and their interaction with metribuzin. Am. Potato J. 65: 535-541.

Cranshaw, W.S., S.J. Day, T. Gritzmacher, and R.J. Zimmerman. 1989. Field and laboratory evaluations of *Bacillus thuringiensis* strains for elm leaf beetle control. J. Arboriculture 15 (2): 31-4.

Zimmerman, R.J. and W.S. Cranshaw. 1990. Compatibility of three entomogenous nematodes (Rhabditida) in aqueous solutions of pesticides used in turfgrass maintenance. J. Econ. Entomol. 83 (1): 97-100.

Cranshaw, W.S. and R.J. Zimmerman. 1989. Biological, mechanical and chemical control of turfgrass-infesting scarabs in Colorado. Southwestern Entomologist. 14: 351-55.

Cranshaw, W.S. 1989. Patterns of galling by the Cooley spruce gall adelgid, *Adelges colleyi*, on Colorado blue spruce. J. Arboriculture 15: 277-280.

Cranshaw, W.S., B.K. Kondratieff, and T. Qian. 1990. Insects associated with quinoa, *Chenopodium quinoa*, in Colorado. J. Kansas Entomol. Soc. 63 (1): 195-99.

Cranshaw, W.S. and D.J. Liewehr. 1990. Effects of colored sprays on aphid and psyllid colonization of potatoes. Southwestern Entomologist. 15 (2): 205-209.

Liewehr, D.J. and W.S. Cranshaw. 1991. Effects of background color and background patterns on landing rates of aphids. Southwestern Entomologist 16: 13-18.

Zimmerman, R.J. and W.S. Cranshaw. 1991. Short-term movement of *Neoaplectana* spp. (Rhabdita: Steinernematidae) and *Heterorhabditis* 'HP-88' strain (Rhabdita: Heterorhabditidae) through turfgrass. J. Econ. Entomol. 84: 875-878.

Shean, B. and W.S. Cranshaw. 1991. Differential susceptibilities of green peach aphid (Homoptera: Aphididae) and two endoparasitoids (Hymenoptera: Encyrtidae and Hymenoptera: Braconidae) to pesticides. J. Econ. Entomol. 84: 844-850.

Cranshaw, W.S. 1993. An annotated bibliography of the potato/tomato psyllid, *Paratrioza cockerelli* (Sulc). Colorado Agric. Expt. Stn. Bull. TB93-5. 51 pp.

Meyer, W.L. and W.S. Cranshaw. 1994. Capture of clearwing borers (Lepidoptera: Sesiidae) with three synthetic attractants in Colorado. Southwestern Entomol. 19(1): 71-76.

Kondratieff, B.C. and W.S. Cranshaw. 1994. Insect and mite pests associated with West Slope wine grapes. Colo. Agric. Expt. Stn. Tech. Rpt TR94-1. 12 pp.

Eckberg, T.B. and W.S. Cranshaw. 1994. Larval biology and control of the rabbitbrush beetle, *Trirhabda nitidicollis* (LeConte) (Coleoptera: Chrysomelidae). Southwestern Entomol. 19(3): 249-256.

Eckberg, T.B. and W.S. Cranshaw. 1995. Occurrence of the rough bulletgall wasp, *Disholcaspis quercusmamma* (Hymenoptera: Cynipidae) as a street tree pest in Colorado. J. Kansas Entomol. Soc. 67(3): 290-293.

Eckberg, T.B. and W.S. Cranshaw. 1995. Notes on the biology and control of the poplar twig gall fly, *Hexomyza schineri* (Giraud) (Diptera: Agromyzidae), an emerging pest of aspen in Colorado. J. Kansas Entomol. Soc. 68(2): 127-132.

Zimmerman, R.J., D.C. Sclar, T. Randolph and W.S. Cranshaw. 1995. Toxicity of neem-derived insecticides to various life stages of the elm leaf beetle. J. Arboric. 21: 181-186.

Sclar, D.C. and W.S. Cranshaw. 1996. Evaluation of new systemic insecticides for elm insect

pest control. *J. Envir. Hort.* 14(1): 22-26.

Cranshaw, W. S., Sclar, D.C. and D. Cooper. 1996. A review of pricing and associated literature of suppliers providing organisms for biological control of arthropods in 1994. *Biological Control: Theories and Applications in Pest Management.* 6: 291-296.

Al-dosari, S.A., W.S. Cranshaw and F.C. Schweissing. 1996. Effects on control of onion thrips from co-application of onion pesticides. *Southwestern Entomol.* 21(1): 49-54.

McIntyre, J.A., D.A. Hopper and W.S. Cranshaw. 1996. Aluminized fabric deters thrips from entering greenhouses. *Southwestern Entomol.* 21(2): 135-40.

Cranshaw, W.S. 1997. Attractiveness of beer and fermentation products to the gray garden slug, *Agriolimax reticulatum* (Muller) (Mollusca: Limacidae). Colorado State Agricultural Experiment Station Technical Bulletin TB97-1. 7 pp.

Sclar, D. Casey, W.S. Cranshaw and W.R. Jacobi. 1997. Integrated pest management practices in Colorado: A survey of woody plant nurseries and homeowners, 1995-1996. Colorado State Agricultural Experiment Station Technical Bulletin TB97-2. 17 pp.

Cranshaw, W. and F. Schweissing. 1997. Adult control of striped cucumber beetle for management of larval injury to cantaloupe. *Southwestern Entomol.* 22(2): 217-221.

Sclar, D.C., D. Gerace and W.S. Cranshaw. 1998. Observations of population increases and injury by spider mites (Acari: Tetranychidae) on ornamental plants treated with imidacloprid. *J. Econ. Entomol.* 91(1): 250-255.

Sclar, D.C., D. Gerace, A. Tupy, K Wilson, S.A. Spriggs, R.J. Bishop, and W.S. Cranshaw. 1999. Effects of application of various reduced risk pesticides to tomato, with notes on control of greenhouse whitefly. *HortTechnology* 9(2): 185-189.

Cooper, D.D. and W.S. Cranshaw. 1999. The natural enemy complex associated with pine needle scale, *Chionaspis pinifoliae* (Fitch) (Homoptera: Diaspididae), in North Central Colorado. *J. Kansas Entomol. Soc.* 72(1): 131-133.

Al-Doghairi, M.A. and W.S. Cranshaw. 1999. Surveys on visitation of flowering plants by common biological control agents in Colorado. *J. Kansas. Entomol. Soc.* 72(2): 190-196.

Cranshaw, W., Z. Jevremovic, D.C. Sclar and L. Mannix. 2000. Observations on the biology and control of the hawthorn (two-circuli) mealybug, *Phenacoccus dearnessi* (King). *J. Arboric.* 26(4): 225-229.

Cranshaw, W., M. Bartolo and F. Schweissing. 2001. Control of squash bug injury; management manipulations at the base of pumpkin. *Southwestern Entomol.* 26(2): 147-150.

Cranshaw, W.S. 2004. Book Review *A Color Atlas of Pests of Ornamental Trees, Shrubs, and Flowers.* *American Entomologist* 49(2): 122

Cooper, D.D. and W.S. Cranshaw. 2004. Seasonal biology and associated natural enemies of two *Toumeyella* spp. in Colorado. *Southwestern Entomol.* 29(1): 39-45

Al-doghairi, M.A. and W.S. Cranshaw. 2004. The effect of interplanting of nectariferous plants on the population density and parasitism of cabbage pests. *Southwestern Entomol.* 29(1) 61-68.

Demirel, N. W. Cranshaw and A. Norton. 2005. Survey of *Lygus* spp. and an associated parasitoid, *Leiophron uniformis* (Gahan), in Colorado. *Southwestern Entomol.* 30(1): 9-15.

Cooper, D.D. and W.S. Cranshaw. 2005. Life history of the pine needle scale, *Chionaspis pinifoliae* (Fitch), in northeastern Colorado. *Southwestern Entomol.* 30(1): 55-60.

Demirel, N. and W. Cranshaw. 2005. Evaluation of spring canola and mustards of varying age for relative preference by false chinch bugs, *Nysius raphanus* (Howard). *Pakistan Journal of Biological Sciences* 8(4): 665-668.

Demirel, N. and W. Cranshaw. 2005. Colonization of cabbage by the western black flea beetle

(*Phyllotreta pusilla*) as affected by mulch and time of day. *Phytoparasitica* 33(3): 309-313.

Cranshaw, Whitney. 2006. Colorado Insecticide Trials for Control of Thrips on Onions 1995-2006. Colo. Agric. Expt. Stn. Bull TB06-01 48 pp.

Cranshaw, Whitney and Nihat Demirel. 2006. Early Season Sampling of Three Pests of Oilseed Brassicas (False Chinch Bug, *Phyllotreta* Flea Beetles, *Lygus* Bugs) on Cultivated and Non-Cultivated Crops. Colo. Agric. Expt. Stn. Bull TB06-02 18 pp.

Cranshaw, W.S. 2006. Attitudes and concerns about spiders expressed in a Freshman entomology class. *American Entomologist* 52(4): 234-238.

Demirel, N. and W. Cranshaw. 2006. Permethrin treatment of pollination bags as a protecting from false chinch bug, *Nysius raphanus* (Howard) (Hemiptera: Lygaeidae), injury to canola in Colorado. *Crop Protection* 25(6): 1062-1064.

Al-Jabr, A.M. and W.S. Cranshaw. 2007. Trapping tomato psyllid, *Bactericera cockerelli* (Sulc) (Hemiptera: Psyllidae), in greenhouses. *Southwestern Entomologist* 32(1): 25-30.

Cranshaw, W. and M. Camper. 2007. Management of poplar twiggall fly on nursery-grown aspen. *J. Env. Hort.* 25(1): 33-35.

Kondratieff, B. and W. Cranshaw. 2007. Common Insects, Spiders, Ticks, and Scorpions of Fort Sill, Oklahoma. United States Government Printing Office 653-331. 85 pp.

Tisserat, N., Cranshaw, W., Leatherman, D., Utley, C., and Alexander, K. 2009. Black walnut mortality in Colorado caused by the walnut twig beetle and thousand cankers disease. Online. *Plant Health Progress* 11 August, 2009. doi:10.1094/PHP-2009-0811-01-RS

Kramer, K. and W.S. Cranshaw. 2009. Effects of supplemental irrigation on populations of clover mite, *Bryobia praetiosa* Koch (Acari: Tetranychidae), and other arthropods in a Kentucky bluegrass lawn. *Southwestern Entomologist* 34 (1):69-74.

Schwartz, H.F., D.H. Gent, S.C. Fichtner, R. Hammon. W.S. Cranshaw, L. Mahaffey, M. Camper, K. Otto and M. McMillan. 2009. Straw mulch and reduced risk pesticides: Impacts on thrips and Iris yellow spot virus on western-grown onions. *Southwestern Entomologist* 34 (1): 13-29.

### **Abstracts**

Freeland, E.M. Kolarik, C. Utley, W. Cranshaw and N. Tisserat. 2009. The *Geosmithia* causing thousand cankers disease of walnut is a new species. *Phytopathology* 99:S37.

Tisserat, N., W. Cranshaw, D. Leatherman, C. Utley and K. Alexander. 2009. Black walnut mortality in Colorado caused by the walnut twig beetle and thousand cankers disease. *Phytopathology* 99:S128.

### **Book Chapters (Prior to 2000)**

Bjostad, L.B., B.E. Hibbard, and W.S. Cranshaw. 1993. Chap. 17. Application of semiochemicals in integrated pest management programs. *in Pest Control Agents and Technologies with Reduced Environmental Impact*. S.O. Duke, J.J. Menn, and J.R. Plimmer, eds. Amer. Chem. Soc. Symposium Series. Washington, D.C.

Cranshaw, W.S. 1994. The potato (tomato) psyllid, *Paratrioza cockerelli* (Sulc), as a pest of potatoes. pp 83-98 *in Advances in Potato Pest Biology and Management*. The American Phytopathological Society. St. Paul. MN 655 pp.

Cranshaw, W.S. and M.G. Klein. 1994. Chapter 45. Microbial Control of Insect Pests of Landscape Plants. *in IPM of Turfgrass and Ornamentals*. ed. A. Leslie. Lewis Publishing. Boca Raton, FL. pp 503-521.

- Cranshaw, W.S. 1994. Chapter 20. Use of Attractants in Control of Insect Pests of Landscape Plants. *in* *IPM of Turfgrass and Ornamentals*. ed. A. Leslie. Lewis Publishing. Boca Raton, FL. pp 337-346.
- Cranshaw, W.S. 1994. Natural Pesticides. *in* *Natural Insect Control*. ed. Warren Schultz. Brooklyn Botanic Garden Handbook No. 139. Brooklyn, NY. pp. 95-103.
- Cranshaw, W.S. and L.G. Skoglund. 1994. Pest Management for Colorado Gardeners. *in* *Successful Gardening for Colorado*. ed. Carl Anderson. pp. 164-173.
- Cranshaw, W.S., C. Welty and R. Bessin. 1995. Chapter 7. Peppers and Eggplant; Hutchison, B, G. Klacan, and W.S. Cranshaw. Chapter 4. Green Peas; Kortier Davis, M., E. Grafius, W. Cranshaw and T. Royer. Chapter 11. Onions *in* *Vegetable Insect Management; with Emphasis on the Midwest*. ed. R. Foster and B. Flood. Meister Publishing Co. Willoughby, Ohio. 206 pp.
- Cranshaw, W.S. and J.A. Reinert. 1995. Clover and Other Non-eriophyid Mites. pp. 42-46. *in* *Handbook of Turfgrass Insect Pests*. eds. R.L. Brandenburg and M.G. Villani. Entomological Society of America. Lanham, MD. 140 pp.

### **Presentations/Posters Presented at Professional Meetings (prior to 2013)**

- Cranshaw, W. S. and E. B. Radcliffe. 1978. Effects of artificial defoliation on potato yield. 33rd Annual Meeting, North Central Branch, Entomological Society of America. Madison, Wisconsin.
- Barbosa, P., J. Greenblatt, W. Withers and W. Cranshaw. 1978. Host plant preferences and the induction of preferences in larval gypsy moths, *Lymantria dispar* L. 1978 Annual Meeting, Entomological Society of America. Houston, Texas.
- Barbosa, P., W. Cranshaw and J. Greenblatt. 1979. Behavioral polymorphism in gypsy moth and the influence of quantity and quality of food. 1979 Annual Meeting, Entomological Society of America. Denver, Colorado.
- Cranshaw, W. S. and E. B. Radcliffe. 1979. Insect contaminants of processed green peas in Minnesota. 1979 Annual Meeting, Entomological Society of America. Denver, Colorado.
- Cranshaw, W. S. and E. B. Radcliffe. 1980. Sequential sampling lines for action thresholds of aphids and leafhoppers in potatoes. 35th Annual Meeting, North Central Branch, Entomological Society of America. Lincoln, Nebraska.
- Cranshaw, W. S. and E. B. Radcliffe. 1980. Components of an integrated control plan for insects of processing peas in Minnesota. 1980 National Conference, Entomological Society of America. Atlanta, Georgia.
- Cranshaw, W. S. and E. B. Radcliffe. 1981. The role of biological control in the control of insect contaminants of processing peas. 36th Annual Meeting, North Central Branch, Entomological Society of America. Columbus, Ohio.
- Cranshaw, W. S. and E. B. Radcliffe. 1981. The use of heat unit accumulations for control of insects of processing peas. 36th Annual Meeting, North Central Branch, Entomological Society of America, Sioux Falls, South Dakota.
- Cranshaw, W. S. 1982. Green pea IPM-Coping with a low density pest complex. 37th Annual Meeting, North Central Branch, Entomological Society of America, Sioux Falls, South Dakota.
- Cranshaw, W. S. 1983. Effect of systemic insecticides on potato growth. 38th Annual Meeting, North Central Branch, Entomological Society of America, St. Louis, Missouri.
- Warners, D. D., J. A. Lofgren and W. S. Cranshaw. 1983. Study of interaction between phosphate and carbamate insecticides and corn herbicides. 38th Annual Meeting, North Central Branch, Entomological Society of America, St. Louis, Missouri.

Cranshaw, W. S. and T. C. Schenk. 1984. Corn rootworm egg laying and larval survival in first year Minnesota field corn. 39th Annual Meeting, North Central Branch, Entomological Society of America, Wichita, Kansas.

Cranshaw, W. S. 1984. Aphid colonization of potatoes as affected by cultural practices. 1984 National Conference meeting, Entomological Society of America, San Antonio, Texas.

Cranshaw, W. S. 1985. Biology and control of the honeylocust pod gall midge in Colorado. 40th Annual Meeting, North Central Branch, Entomological Society of America, Lexington, Kentucky.

Cranshaw, W. S. 1986. Potato psyllid management on potatoes and tomatoes. 41st Annual Meeting, North Central Branch, Entomological Society of America, Minneapolis, Minnesota.

Cranshaw, W. S. and F. B. Peairs. 1986. Recent developments in Extension Entomology at Colorado State University. 1986 National Conference, Entomological Society of America, Reno, Nevada.

Liewehr, D. J. and W. S. Cranshaw. 1986. Effect of trap pan modifications on aphid captures. 41st Annual Meeting, North Central Branch, Entomological Society of America, Minneapolis, Minnesota.

Liewehr, D. J. and W. S. Cranshaw. 1986. Effect of ground cover manipulations on potato insect populations. 1986 National Conference, Entomological Society of America, Reno, Nevada.

Hammon, R. and W. S. Cranshaw. 1986. Use of indicator plants to monitor time and spread of potato leafroll virus. 1986 National Conference, Entomological Society of America, Reno, Nevada.

Meyer, W. L., W. S. Cranshaw, T. D. Eichlin and D. J. Liewehr. 1986. Notes on the biology of clearwing borer moths (Lepidoptera: Sesiidae) in Colorado based on pheromone trap captures. 1986 National Conference, Entomological Society of America, Reno, Nevada.

Zimmerman, R. J. and W. S. Cranshaw. 1986. Leaf vagrant eriophyids as an emerging problem in Colorado. 1986 National Conference, Entomological Society of America Reno, Nevada.

Cranshaw, W. S. 1986. Boring insects. National Urban Tree Symposium. Denver, Colorado.

Cranshaw, W. S. 1987. Use of soil-applied systemic insecticides for insect control on woody ornamentals, 1985-1987 results. 1987 National Conference, Entomological Society of America, Boston, MA.

Zimmerman, R. J. and W. S. Cranshaw. 1987. Movement of entomogenous nematodes through thatch of turfgrass. 1987 National Conference, Entomological Society of America, Boston, MA.

Cranshaw, W. S. 1988. Patterns of infestation by the Cooley spruce gall adelgid on Colorado blue spruce. 43rd annual Meeting, NCB-ESA, Denver, CO.

Abernathy, R. and W. S. Cranshaw. 1988. Effect of potato psyllid on various solanaceous hosts. 43rd Annual Meeting, NCB-ESA, Denver, CO.

Young, J. and W. S. Cranshaw. 1988. Managing thrips damage to snow peas. 43rd Annual Meeting, NCB-ESA, Denver, CO.

Cranshaw, W. S. 1988. Slugfest 1987: Trials involving the attraction of slugs to fermenting liquids. 43rd Annual Meeting, NCB-ESA, Denver, CO.

Shean, B. S. and W. S. Cranshaw. 1988. Insects and their associated damage to quinoa in Colorado. 43rd Annual Meeting, NCB-ESA, Denver, CO.

Abernathy, R., W.S. Cranshaw, and L. Bjostad. 1988. Investigations into the nature of the potato psyllid toxin. 1988 Annual Conference, Entomological Society of America, Louisville, KY.

Cranshaw, W.S. 1988. Flower thrips as pests of Colorado snow peas. 1988 Annual Conference,

Entomological Society of America, Louisville, KY.

Shean, B. and W.S. Cranshaw. 1988. Evaluation of several hymenopteran parasitoids for control of green peach aphid, *Myzus persicae*, in greenhouses. 1988 Annual Conference, Entomological Society of America, Louisville, KY.

Zimmerman, R.J., S. Day, T. Gritzmacher, and W.S. Cranshaw. 1988. Use of *Bacillus thuringiensis* 'San Diego' strain for control of elm leaf beetle in Colorado. 1988 Annual Meeting, Entomological Society of America, Louisville, KY.

Cranshaw, W.S. 1989. Tobacco budworm as a pest of bedding plants. 1989 Annual Meeting, Entomological Society of America, San Antonio, TX.

Zimmerman, R.J. and W.S. Cranshaw. 1989. Horticultural oils for managing elm insect pests. 1989 Annual Meeting, Entomological Society of America, San Antonio, TX.

Zimmerman, R.J., J.C. Moore, and W.S. Cranshaw. 1990. Impact of entomogenous nematodes and selected insecticides on non-target species in turfgrass. 1990 Annual Meeting, Entomological Society of America, New Orleans, LA.

Cranshaw, W.S. and R.J. Zimmerman. 1990. Feeding preferences of nuisance foraging ants. 1990 Annual Meeting, Entomological Society of America, New Orleans, LA.

Cranshaw, W.S., R. Durfee and R.J. Zimmerman. 1991. Biology and management of spider mites damaging to Colorado turfgrass. 1991 Annual Meeting, Entomological Society of America, Reno, NV.

Cranshaw, W.S. 1992. Potato psyllid as a pest of peppers. 1992 Annual Meeting, Entomological Society of America. Baltimore, MD.

Aldosari, S. and W.S. Cranshaw. 1992. Varietal based action thresholds for onion thrips on onions. 1992 Annual Meeting, Entomological Society of America. Baltimore, MD.

Eckberg, T.E. and W.S. Cranshaw. 1992. Control of Douglas-fir tussock moth on blue spruce in a landscape setting. 1992 Annual Meeting, Entomological Society of America. Baltimore, MD.

Cranshaw, W.S. and S. Hoffman. 1993. Insects associated with canola and quinoa in Colorado. 1993 Annual Meeting, Entomological Society of America. Indianapolis, IN.

Al-Dosari, S. and W.S. Cranshaw. 1993. Varietal-based action thresholds for onion thrips on bulb onions. 1993 Annual Meeting, Entomological Society of America. Indianapolis, IN.

Eckberg, T. and W.S. Cranshaw. 1993. Poplar twig gall fly as a new pest of aspen in ornamental plantings. 1993 Annual Meeting, Entomological Society of America. Indianapolis, IN.

Sclar, C.S. and W.S. Cranshaw. 1993. Evaluations of systemic insecticides for management of woody plant arthropod pests. 1993 Annual Meeting, Entomological Society of America. Indianapolis, IN.

Sclar, C.S. and W.S. Cranshaw. 1994. Field performance of imidacloprid on woody ornamental plant pests: Two year evaluation. 1994 Annual Meeting, Entomological Society of America. Dallas, TX.

Aldoghairi, M.A. and W.S. Cranshaw. 1994. Status on the use of flowering plants to increase natural enemy activity against Colorado plant pests. 1994 Annual Meeting, Entomological Society of America. Dallas, TX.

Cooper, D.D. and W.S. Cranshaw. 1994. The natural enemy complex associated with *Chionaspis pinifoliae* (Fitch) populations in Colorado. 1994 Annual Meeting, Entomological Society of America. Dallas, TX.

Cranshaw, W.S. and S. Aldosari. Interactions of onion thrips and cultural practices on onions. 1994 Annual Meeting, Entomological Society of America. Dallas, TX.

McIntyre, J.A., W.S. Cranshaw, and D.A. Hopper. 1995. Managing thrips migration into

greenhouses with reflective surfaces. 1995 Annual Meeting, Entomological Society of America. Las Vegas, NV.

Nelson, E.E. and W.S. Cranshaw. 1995. Dusky sap beetle as a pest of western Colorado sweet corn. 1995 Annual Meeting, Entomological Society of America. Las Vegas, NV.

Sclar, D.C. and W.S. Cranshaw. 1995. Seasonal biology and management of honeylocust spider mite in Colorado. 1995 Annual Meeting, Entomological Society of America. Las Vegas, NV.

Aldosari, S.A. and W.S. Cranshaw. 1995. Seasonal shifts in insecticide resistance among *Thrips tabaci* in field populations. 1995 Annual Meeting, Entomological Society of America. Las Vegas, NV.

Sclar, D.C. and W.S. Cranshaw. 1996. Evaluation of neem-derived and IGR insecticides for control of tent caterpillars and fall webworm on woody ornamental plants. 1996 Annual Meeting, Entomological Society of America. Louisville, KY.

Gerace, D., D.C. Sclar and W.S. Cranshaw. 1996. Non-target effects of chemical and cultural practices on spider mites on ornamentals. 1996 Annual Meeting, Entomological Society of America. Louisville, KY.

Bishop, J., E.E. Nelson, W.S. Cranshaw and R.J. Bartelt. 1996. Monitoring and management of sap beetles associated with sweet corn. 1996 Annual Meeting, Entomological Society of America. Louisville, KY.

Al-Doghairi, M.A. and W.S. Cranshaw. 1996. Pest management tactics for the western cabbage flea beetle on cole crops. 1996 Annual Meeting, Entomological Society of America. Louisville, KY.

Cranshaw, W.S. and F.C. Schweissing. 1996. Development of pest management system for onion thrips: Review of 1991-1996 studies. 1996 Annual Meeting, Entomological Society of America. Louisville, KY.

Kramer, K.A., A. Tupy, S. McElwey and W.S. Cranshaw. 1997. Biology and control of clover mites in turfgrass. 1997 Annual Meeting, Entomological Society of America. Nashville, TN.

Gerace, D. and W.S. Cranshaw. 1997. Cultural practices to control western flower thrips and twospotted spider mites on ornamental plants. 1997 Annual Meeting, Entomological Society of America. Nashville, TN.

Sclar, D.C. and W.S. Cranshaw. 1997. Seasonal biology and control of spider mites on coniferous ornamental plants. 1997 Annual Meeting, Entomological Society of America. Nashville, TN.

Al-doghairi, M. and W.S. Cranshaw. 1997. Pest management tactics for the western cabbage flea beetle on cole crops. 1997 Annual Meeting, Entomological Society of America. Nashville, TN.

Kramer, K and W. S. Cranshaw. Biology and control of clover mites affecting turfgrass. 1998 Joint Annual Meeting Entomological Society of America/American Phytopathological Society. Las Vegas, NV.

Al-doghairi, Mohammed and W. S. Cranshaw. Pest-management tactics for the western cabbage flea beetle on cole crops. 1998 Joint Annual Meeting Entomological Society of America/American Phytopathological Society. Las Vegas, NV.

Demirel, Nihat and W. S. Cranshaw. Evaluations of repellent and microbial insecticides for grasshopper control in gardens. 1998 Joint Annual Meeting Entomological Society of America/American Phytopathological Society. Las Vegas, NV.

McElwey, Sally, W. S. Cranshaw and F.B. Peairs. Investigations into bee losses in Colorado. 1998 Joint Annual Meeting Entomological Society of America/American Phytopathological

Society. Las Vegas, NV.

Mannix, L., W. S. Cranshaw and K. Kramer. Evaluations of green lacewing eggs for control of woody plant pests. 1999 Annual Meeting, Entomological Society of America. Atlanta, GA.

Cranshaw, W.S., Z. Jevremovic, D. Sclar, and L. Mannix. Observations on the biology and control of the hawthorn mealybug, *Phenacoccus dearnessi*. 1999 Annual Meeting, Entomological Society of America. Atlanta, GA.

Walker, G., W.S. Cranshaw, W.S., E. Fromm, and L.B. Bjostad. Researching IPM strategies for the pavement ant, *Tetramorium caespitum*, a nuisance pest in urban settings. 1999 Annual Meeting, Entomological Society of America. Atlanta, GA.

W.S. Cranshaw. Over-the-counter pest management products: A bumpy road in the post OP period. (Invited symposium speaker). 2004 Annual Meeting, Entomological Society of America. Salt Lake City, UT.

Sever, A. and W.S. Cranshaw. *Agrilus quercicola* as an emergent pest of Gambel and landscape oak. 2004 Annual Meeting, Entomological Society of America. Salt Lake City, UT.

Owens, J. and W.S. Cranshaw. Area-wide migration of striped cucumber beetle and modifications used in its monitoring. 2004 Annual Meeting, Entomological Society of America. Salt Lake City, UT.

Camper, M., R. Hammon and W.S. Cranshaw. Japanese beetle eradication in western Colorado: A model of community involvement. 2004 Annual Meeting, Entomological Society of America. Salt Lake City, UT.

Cranshaw, W.S. 2005. Garden Insects of North America: The Ultimate Guide to Backyard Bugs. (Invited symposium speaker on entomology writing). 2005 Annual Meeting, Entomological Society of America. Ft. Lauderdale, FL.

Mahaffey, L. and W.S. Cranshaw. 2005. Onion thrips management with mulches and repellent based strategies. 2005 Annual Meeting, Entomological Society of America. Ft. Lauderdale, FL.

Cranshaw, W.S. 2005. Poplar twig gall fly as a nursery pest of aspen. 2005 Annual Meeting, Entomological Society of America. Ft. Lauderdale, FL.

Mahaffey, L., W. Cranshaw, H. Schwartz, M. Camper, and S. Fichtner. 2006. Effects of mulches on thrips populations, virus, and onions. 2006 Annual Meeting, Entomological Society of America. Indianapolis, IN.

Cranshaw, W.S. 2008. The walnut twig beetle and its association with 1000 cankers disease of walnut. Symposium on Emerging Pests. Entomological Society of America Annual Meeting. Reno NV.

Cranshaw, W. 2009. Toxicity of reduced risk insecticides to *Diorhabda elongata*. 2009 Tamarisk and Russian Olive Research Conference. Reno, NV. February 18-19, 2009.

Cranshaw, W. 2009. Insect Scatology: Diagnosing insect problems by their 'leavings'. Utah IPM Diagnostic Workshop. Provo, UT February, 2009.

Cranshaw, W. 2009. Gardening for Insects - or Not! Utah IPM Diagnostic Workshop. Provo, UT February, 2009.

Utley, C., W. Cranshaw and N. Tisserat. 2009. New observations on *Pityophthorus juglandis* and thousand cankers disease. Entomological Society America Annual Meeting. December 13-16, 2009. Indianapolis, IN.

Cranshaw, W. 2009. A review of nuisance invader pests in the United States. Entomological Society America Annual Meeting. December 13-16, 2009. Indianapolis, IN.

Cranshaw, W. 2009. Thousand cankers disease - New Mexico's Gift to North American *Juglans*. Seminar presented to the Department of Entomology and Plant Pathology, New

Mexico State University, Las Cruces, NM. April 15, 2009.

Cranshaw, W. 2009. Thousand cankers disease - Arizona's Gift to North American *Juglans*. Seminar presented to the USDA-FS Experiment Station, Northern Arizona University, Flagstaff, AZ. April 14, 2009.

Cranshaw, W. 2009. Thousand Cankers Disease: Black Walnut's Worst Nightmare. National Plant Board Annual Meeting. Oklahoma City, OK. August 8, 2009.

Cranshaw, W. 2009. Issues surrounding management of thousand cankers disease. Thousand Cankers/Black Walnut National Conference. St. Louis, MO. November 3-4, 2009.

Cranshaw, W. 2010. Nightmare on Walnut Street: Thousand Cankers Disease as an Emergent Threat to *Juglans*. Whitney Cranshaw. Invited Speaker. International Society of Arboriculture Annual Conference, Chicago, IL July 27, 2010

McEwen, C. and W. Cranshaw. 2010. Description of the sexual generation of *Disholcaspis quercusmamma* (Walsh) (Hymenoptera: Cynipidae). 58<sup>th</sup> Annual Meeting, Entomological Society of America. San Diego, CA.

Peachey, E., N. Tisserat, and W. Cranshaw. 2011. Attraction of walnut twig beetle adults and larvae to the fungus *Geosmithia morbida*. 59<sup>th</sup> Annual Meeting, Entomological Society of America. Reno, NV.

Peachey, E., N. Tisserat, and W. Cranshaw. 2011. Effect of freezing temperatures on survival of the walnut twig beetle (*Pityophthorus juglandis*). 59<sup>th</sup> Annual Meeting, Entomological Society of America. Reno, NV.

Cranshaw, W. 2011. Pest management challenges in production of medical marijuana in Colorado. 59<sup>th</sup> Annual Meeting, Entomological Society of America. Reno, NV.

McEwen, C. and W. Cranshaw. 2011. Effects of methyl jasmonate applications on insect pests of crucifers. 59<sup>th</sup> Annual Meeting, Entomological Society of America. Reno, NV.

Cranshaw, W. 2012. Thousand Cankers Disease: Overview and Origins. Invited speaker at Southern Forest Insects Work Conference. Charlotte, VA

Cranshaw, W. 2012. Thousand cankers disease, and example of a lethal collaboration between insects and pathogens of amenity trees. 60<sup>th</sup> Annual Meeting, Entomological Society of America. Knoxville, TN.

Cranshaw, W. 2012. The discovery of walnut twig beetle in Colorado and pathways to the world. 60<sup>th</sup> Annual Meeting, Entomological Society of America. Knoxville, TN.

Peachey, E., N. Tisserat, and W. Cranshaw. 2011. Attraction of walnut twig beetle adults and larvae to the fungus *Geosmithia morbida*. 59<sup>th</sup> Annual Meeting, Entomological Society of America. Reno, NV.

### **Insecticide and Acaricide Tests/Arthropod Management Tests (1978-2002)**

Cranshaw, W.S. and E.B. Radcliffe. 1978. Potato insect control, Grand Forks, North Dakota, 1977. 3: 85-6.

Cranshaw, W.S., E.B. Radcliffe and G. Klacan. 1979. Control of armyworms and loopers in peas, 1978. 4: 84.

Cranshaw, W.S. and E.B. Radcliffe. 1979. Green peach aphid control with foliar insecticide sprays, 1978. 4: 91.

Cranshaw, W.S. and E.B. Radcliffe. 1979. Green peach aphid control with soil applied systemic insecticides, 1978. 4: 91.

Cranshaw, W.S. and E.B. Radcliffe. 1979. Soybean insect control with foliar insecticides, 1978. 4: 158-9.

Cranshaw, W.S. and E.B. Radcliffe. 1980. Control of cabbage loopers, spotted cutworms, and pea aphids in peas, 1979. 5: 81.

Cranshaw, W.S. and E.B. Radcliffe. 1980. Colorado potato beetle control with foliar insecticides, 1979. 5: 84.

Cranshaw, W.S. and E.B. Radcliffe. 1980. Colorado potato beetle control. 5: 84.

Cranshaw, W.S. and E.B. Radcliffe. 1980. Control of azinphosmethyl resistant green peach aphids with foliar insecticides. 5: 96-7.

Cranshaw, W.S., R.L. Johnston, G.W. Cuperus and E.B. Radcliffe. 1981. Aerial sprays for control of European corn borer in snap bean, 1980. 6: 77.

Cranshaw, W.S., R.L. Johnston and E.B. Radcliffe. 1981. European corn borer control on snap bean, ground trial, 1980. 6:78.

Cranshaw, W.S. and E.B. Radcliffe. 1981. Cabbage insect control, 1980. 6: 87.

Cranshaw, W.S., G.W. Cuperus and E.B. Radcliffe. 1981. Control of loopers and alfalfa caterpillars in peas, 1980. 6: 129.

Radcliffe, E.B., W.S. Cranshaw, R.L. Johnston and G.W. Cuperus. 1981. Potato pest control studies, aerial trials, 1980. 6: 150.

Cranshaw, W.S. and E.B. Radcliffe. 1981. Control of caterpillars in peas, 1980. 6: 129.

Cuperus, G.W., E.B. Radcliffe and W.S. Cranshaw. 1981. Alfalfa insect control studies, 1980. 6: 174.

Cranshaw, W.S., R.L. Johnston and E.B. Radcliffe. 1981. Barley insect control, 1980. 6: 186.

Cranshaw, W.S., R.L. Johnston and E.B. Radcliffe. 1981. Control of banded sunflower moth injury in sunflower, 1980. 6: 266.

Cranshaw, W.S., R.L. Johnston, G.W. Cuperus and E.B. Radcliffe. 1982. Control of lepidopterous larvae in cabbage, 1981. 7: 67-8.

Cranshaw, W.S. and E.B. Radcliffe. 1982. Control of insects of snap bean, 1981. 7: 63.

Cranshaw, W.S., E.B. Radcliffe, R.L. Johnston and G.W. Cuperus. 1982. Control of azinphosmethyl resistant green peach aphids on potato, 1981. 7: 149.

Cranshaw, W.S., R.S. Schmidt and E.B. Radcliffe. 1982. Test of pyrethroid insecticides for repellancy to honey bees foraging on sunflowers. 7: 193.

Cranshaw, W.S. and E.B. Radcliffe. 1982. Control of caterpillars in peas, 1981. 7: 96.

Cranshaw, W.S. 1983. Control of first brood European corn borer in field corn, 1982. 8: 302.

Cranshaw, W.S. 1983. Effect of application timing on control of European corn borer damage to snap bean, 1982. 8: 160.

Cranshaw, W.S. 1983. European corn borer control in snap bean, 1982. 8: 161.

Cranshaw, W.S. 1983. Imported cabbageworm control in broccoli, 1982. 8: 168.

Ragsdale, D.W., W.S. Cranshaw and J. Loughran. 1984. Yellow woollybear control in soybeans, 1983. 9: 381.

Cranshaw, W.S. and J. Gill. 1984. Dingy cutworm control in soybeans, 1983. 9: 366.

Cranshaw, W.S. 1984. Foliar sprays for control of European corn borer, 1983. 9: 286.

Radcliffe, E.B., R.L. Johnston and W.S. Cranshaw. 1984. European corn borer control on sweet corn, 1983. 9: 176.

Cranshaw, W.S. 1985. Control of imported currantworm on currant, Ft. Collins, CO, 1984, 10: 50.

Capinera, J.C. and W.S. Cranshaw. 1985. Cabbage insect control, Ft. Collins, CO, 1984. 10: 95.

Cranshaw, W.S. 1985. Potato insect control, Center, CO, 1984. 10: 178.

Cranshaw, W.S. 1985. Control of potato insects with foliar insecticides, Greeley, CO, 1984. 10: 179.

Cranshaw, W.S. 1985. Control of potato psyllid and green peach aphid, Ft. Collins, CO, 1984. 10: 180.

Cranshaw, W.S. 1985. Control of potato insects with soap sprays, Greeley, CO, 1984. 10: 181.

Cranshaw, W.S. 1985. Control of potato insects with soil applied systemic insecticides, Greeley, CO, 1984. 10: 182.

Cranshaw, W.S. and J.L. Capinera. 1985. Control of alfalfa webworm in alfalfa, Weld County, CO, 1984. 10: 237.

Cranshaw, W.S. and G. Wright. 1985. Pear slug control on cotoneaster, Ft. Collins, CO 1984. 10: 394.

Cranshaw, W.S. and D.J. Liewehr. 1985. Control of fall webworm, Ft. Collins, CO, 1984. 10: 395.

Cranshaw, W.S. 1985. Control of cottonwood blackmine beetle in cottonwood, Ft. Collins, CO 1984. 10: 396.

Cranshaw, W.S. 1985. Persistence study of insecticides used for elm leaf beetle control, Ft. Collins, CO, 1984. 10: 405.

Cranshaw, W.S. and G. Wright. 1985. Control of honeylocust pod gall midge with soil applied systemic insecticides, Ft. Collins, CO, 1984. 10: 418.

Cranshaw, W.S. and R. Baskin. 1985. Control of honeylocust insects, Aurora, CO, 1984. 10: 417.

Wright, G. and W.S. Cranshaw. 1985. Nursery stock phytotoxicity evaluations, Ft. Collins, CO, 1984. 10: 451.

Cranshaw, W.S. and G. Wright. 1985. Control of spider mites on spruce, biorational insecticide evaluation, Ft. Collins, CO, 1984. 10: 466.

Cranshaw, W.S. 1986. Control of aphids and aster yellows in lettuce, Ft. Collins, CO, 1986. 11: 197.

Cranshaw, W.S., M. Pace and F.C. Schweissing. 1986. Control of aster yellows and insect defoliators in lettuce, Rocky Ford, CO, 1985. 11: 198.

Cranshaw, W.S., J.F. Jagne, M.K. Lordier, R.P. Wawrzynski and D.J. Liewehr. 1986. Potato insect control with systemic insecticides, Larimer County, CO, 1985. 11: 216.

Cranshaw, W.S., J. Jagne, M. Lordier and R.P. Wawrzynski. 1986. Control of potato insects with foliar insecticides, Larimer County, CO, 1986. 11: 217.

Liewehr, D.J. and W.S. Cranshaw. 1986. Green peach aphid control on potatoes, Center, CO, 1985. 11: 223.

Cranshaw, W.S., M.K. Lordier, J.F. Jagne, M. Pace, R.P. Wawrzynski and F.C. Schweissing. 1986. Tomato insect control, Rocky Ford, CO, 1985. 11: 245.

Cranshaw, W.S. and R.P. Wawrzynski. 1986. Control of elm leaf beetle larvae with Kryocide and San 416, Ft. Collins, CO, 1985. 11: 490.

Cranshaw, W.S., J.F. Jagne and M.K. Lordier. 1986. Control of a honeylocust plant bug with foliar sprays, Aurora, CO, 1985. 11: 529.

Cranshaw, W.S. and D.J. Liewehr. 1986. Control of honeylocust pod gall midge with foliar applied insecticides, Ft. Collins, CO, 1985. 11: 531.

Cranshaw, W.S. and R.P. Wawrzynski. 1986. Control of honeylocust pod gall midge in potted nursery stock, Ft. Collins, CO, 1985. 11: 532.

Cranshaw, W.S. 1986. Control of honeylocust pod gall midge with foliar insecticides, Ft. Collins, CO, 1985. 11: 530.

Cranshaw, W.S. and W.L. Meyer. 1986. Bedding plant phytotoxicity trial, Ft. Collins, CO, 1985. 11: 547.

Cranshaw, W.S. and R.P. Wawrzynski. 1986. Control of honeylocust pod gall midge with soil applied insecticides, Ft. Collins, CO, 1985. 11: 533.

Wawrzynski, R.P. and W. S. Cranshaw. 1986. Control of honeysuckle aphid in potted nursery stock, Ft. Collins, CO, 1985. 11: 534.

Cranshaw, W.S. and D.J. Liewehr. 1989. Flea beetle control, 1986. 14: 9E.

Cranshaw, W.S., R.J. Zimmerman, and F. Schweissing. Corn earworm control, 1987. 14: 41E.

Cranshaw, W.S. and F. Schweissing. 1989. Control of organophosphate resistant onion thrips. 14: 64E.

Cranshaw, W.S. 1989. Control on onion transplants, 1987. 14: 65E.

Cranshaw, W.S. 1989. Potato insect control, 1986. 14: 77E.

Cranshaw, W.S. 1989. Potato insect control, 1987. 14: 78E.

Cranshaw, W.S. 1989. Control of potato insects, 1987. 14: 79E.

Cranshaw, W.S. 1989. Control on snow peas, 1987. 14: 101E.

Cranshaw, W.S. and F. Schweissing. 1989. Control in tomato, 1986. 14: 108E.

Cranshaw, W.S. 1989. Control of insect pests (quinoa), 1987. 14: 123F.

Cranshaw, W.S. 1989. Control of plant bugs (quinoa), 1987. 14: 124F.

Cranshaw, W.S. and D. Pskowski. 1989. Clover mite control, 1988. 14: 8G.

Cranshaw, W.S., R.J. Zimmerman, and D. Patrick. 1989. Control of elm leaf beetle larvae and eggs with spray oils, 1988. 14: 11H.

Cranshaw, W.S. and B. S. Shean. 1989. European elm scale insecticide evaluations, 1987. 14: 12H.

Cranshaw, W.S. 1989. Control of hackberry psyllids with soil-injected insecticides, Ft. Collins, 1987. 14: 17H.

Cranshaw, W.S. and D. Patrick. 1989. Control of spider mites and rust mites on honeylocust with Danitol and Orthene, Ft. Collins, CO, 1988. 14: 19H.

Cranshaw, W.S. 1989. Control of honeylocust podgall midge with foliar sprays, Ft. Collins, 1988. 14: 20H.

Cranshaw, W.S. 1989. Honeylocust pest control, Ft. Collins, 1987. 14: 21H.

Zimmerman, R.J. and W.S. Cranshaw. Control of honeylocust spider mite, Ft. Collins, 1986. 14: 22H.

Cranshaw, W.S. Control of honeylocust leafhoppers and plant bugs, Ft. Collins, Co. 1987. 14: 23H.

Cranshaw, W.S. 1989. Mite control on honeylocust, Ft. Collins, 1987. 14: 24H.

Cranshaw, W.S., R. Abernathy, and J. Young. 1989. Honeysuckle aphid control with systemic insecticides, Ft. Collins, 1987. 14: 25H.

Cranshaw, W.S. 1989. Evaluation of pyrethroid sprays for control of pinyon spindle gall midge, Ft. Collins, 1988. 14: 29H.

Cranshaw, W.S., L. Bergey, and D. Patrick. 1989. Control of pine needle scale with spray oils, Ft. Collins, 1988. 14: 30H.

Cooper, D. and W. Cranshaw, 1995, Pine needle scale control on Austrian pine, 1994. Arthropod Management Tests: 1995. 20: 17H.

Cooper, D. and W. Cranshaw, 1995, Striped pine scale control, Golden, CO, 1993. Arthropod Management Tests: 1995. 20: 19H.

Cooper, D., Sclar, D. C. and W. Cranshaw, 1995, Control of spruce spider mite on Colorado blue spruce, Ft. Collins, CO, 1993. Arthropod Management Tests: 1995. 20: 24H.

Cranshaw, W., 1995, Control of leafminers in green onions, Ft. Lupton, CO, 1994. Arthropod Management Tests: 1995. 20: 47E.

Cranshaw, W., 1995, Onion thrips control trial, Ft. Collins, CO, 1990. Arthropod Management Tests: 1995. 20: 48E.

Cranshaw, W., 1995, Control of cypermethrin treatment-history thrips in onions, Ft. Morgan, CO, 1994. Arthropod Management Tests: 1995. 20: 49E.

Cranshaw, W., 1995, Control of aphids and psyllids on bell peppers, Brighton, CO, 1992. Arthropod Management Tests: 1995. 20: 58E.

Cranshaw, W., 1995, Black turfgrass atenius rescue trial, Ft. Morgan, CO, 1991. Arthropod Management Tests: 1995. 20: 30G.

Cranshaw, W., 1995, White grub control trial, Ft. Morgan, CO, 1991. Arthropod Management Tests: 1995. 20: 31G.

Cranshaw, W., 1995, Turfgrass mite control trial, Aurora, 1991. Arthropod Management Tests: 1995. 20: 32G.

Cranshaw, W., 1995, Control of mites and thrips in turfgrass, Golden, CO, 1991. Arthropod Management Tests: 1995. 20: 33G.

Cranshaw, W., 1995, Control of mites and thrips on turfgrass, Golden, CO, 1991. Arthropod Management Tests: 1995. 20: 34G.

Cranshaw, W. S. and S. Al-Dosari, 1995, Control of onion thrips in onions, comparison of registered materials, 1992. Arthropod Management Tests: 1995. 20: 43E.

Cranshaw, W. S. and S. Al-Dosari, 1995, Control of onion thrips in onions, adjuvant trial, Greeley, CO, 1992. Arthropod Management Tests: 1995. 20: 45E.

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### **Videotapes/Slide-Tapes**

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O'Malia, G. and W.S. Cranshaw. 1989. Vegetable Garden Pest Management. Videotape 17:10.  
Cranshaw, W.S. 1989. Butterfly Gardening in Colorado. Slide-tape set.  
Cranshaw, W.S. 1990. Recognizing Natural and Biological Insect Controls. Slide-tape set.  
Cranshaw, W.S. 1990. Vegetable Garden Pest Management. Slide-tape set.  
Cranshaw, W.S. 1993. Landscape Pest Management Video Series. (A 9 tape series of issues regarding pest management of turfgrass and woody plants.) Overall project coordinator and producer of 5 videotapes.

### **Special Curriculum Development**

(1996, with Gayla Horvath, Nancy Zuschlag) Developed a Colorado Reader/Ag in the Classroom *Insects and Spiders Helping Humans*. Distributed to 75,000 elementary students statewide. Assisted with accompanying teachers guide.

### **Foreign Pest Management Consulting/Reporting**

Cranshaw, W. Observations of a potato disorder and recommendations for management, Report to the Fundacion Produce Coahuila, A.C. July 2004.

### **Editorial/Consulting Positions**

*Bee Notes* (1988-1993)  
Department of Entomology Newsletter (1988-1996)  
CALCP Denver Post garden column (1990-1992)  
*Sunset* Magazine gardening publications  
*Rocky Mountain Gardener*  
*National Gardening*  
*Organic Gardening*  
Brooklyn Botanic Garden  
Office of Technology Assessment

### **Miscellaneous**

Coordinator/Co-Coordinator of winning entry in Colorado State Homecoming Parade-Novelty Division (1990, 1993, 1998, 1999, 2000, 2001)  
Developed Gillette Entomology Club Slide Collection (1987-89); Revised Gillette Entomology Slide Collection (1993-94)  
Advisor, Gillette Entomology Club (1998-present)  
Contributed 2380 insect images to BugWood/IPM Images, making me the largest single entomology contributor to this nationwide image project (2003-present); arranged for 134 images to be included from the estate of Howard Ensign Evans  
Successfully proposed over 10 common names for insects through the Entomological Society of America Common Names committee process  
Annually contribute produce from field plots to the Food Bank for Larimer County (1998-present)

Participant in Ag Days (1996, 1998-2006)

Coordinator Insect/Plant Horror Film Series (1998-2002)

Captain, Dung Rollers Bowling Team, CSU Recreational League (2002-2007)

4-H Judge, Colorado State Fair (Entomology projects)

Odyssey of the Mind, Poudre School District (Judge 2004-2006, Problem Captain 2006-present)

2006 Larimer County Fair - Won 4 blue ribbons, one red and one white for vegetables and herbs

2008 Larimer County Fair - Won 8 blue ribbons, 2 red and 3 white for vegetables and herbs