

## *Publications for Tracy Sterling*

### BOOKS/BOOK CHAPTERS

**Sterling, T. M., D.C. Thompson** and K.C. McDaniel. 1999. Perennial Snakeweeds. In R. L. Sheley and J. K. Petroff , Eds., *Biology and Management of Noxious Rangeland Weeds*, Oregon State University Press, Corvallis, pages 323-335.

**Sterling, T. M.** and J. C. Hall. 1997. Mechanism of action of natural auxins and the auxinic herbicides. In R. M. Roe, J. D. Burton and R. J. Kuhr (editors), *Herbicide Activity: Toxicology, Biochemistry, and Molecular Biology*, I. O. S. Press, Inc., Amsterdam, pages 205-263.

### JOURNAL PUBLICATIONS

**Sterling, T. M., D. C. Thompson**, and L. A. Abbott. 2005. Implications of invasive plant variation for weed management. *Weed Technology* 19:000-000.

Kulshreshtha, S., **R. Creamer**, and **T. M. Sterling**. 2004. Phylogenetic relationships among New Mexico *Astragalus mollissimus* varieties and *Oxytropis* species by restriction fragment analysis. *Weed Sci.* 52:984-988.

Gibbs, L. A. and **T. M. Sterling**. 2004. Seasonal variation of picloram metabolism in broom and threadleaf snakeweed populations in a common garden. *Weed Sci.* 54:206-212.

**Sterling, T. M.**, and D. Namuth .2004. Auxinic Herbicide Mechanism(s) of Action - Part 1 – Introduction. *J. Natl. Resources & Life Sci. Educ.* 33:E03-9W.

**Sterling, T. M.**, and D. Namuth. 2004. Auxinic Herbicide Mechanism(s) of Action - Part 2 – Advanced. *J. Natl. Resources & Life Sci. Educ.* 33:E03-10W.

Sabba, R. P., I. M. Ray, N. Lownds, and **T. M. Sterling**. 2003. Inheritance of resistance to clopyralid and picloram in yellow starthistle (*Centaurea solstitialis* L.) is controlled by a single nuclear recessive gene. *J. Heredity* 94(6):523-527.

Ratnayaka, H. H., W. T. Molin and **T. M. Sterling**. 2003. Physiological and antioxidant responses of cotton and spurred anoda under interference and mild drought. *J. Exper. Bot.* 54:2293-2305.

Valenzuela-Valenzuela, J. M., N. K. Lownds and **T. M. Sterling**. 2002. Ethylene plays no role in clopyralid action in yellow starthistle (*Centaurea solstitialis* L.). *Pestic. Biochem. Physiol.* 72:142-152.

Valenzuela-Valenzuela, J. M., N. K. Lownds and **T. M. Sterling**. 2001. Clopyralid uptake, translocation, metabolism and ethylene induction in picloram-resistant yellow starthistle (*Centaurea solstitialis* L.). *Pestic. Biochem. Physiol.* 71:11-19.

**Sterling, T. M.**, N. K. Lownds and L. W. Murray. 2001. Similar competitive ability between *Centaurea solstitialis* accessions resistant or susceptible to picloram. *Weed Sci.* 49:42-47.

**Sterling, T. M.**, L. W. Murray and Y. Hou. 2000. Morphological variation among broom snakeweed (*Gutierrezia sarothrae*) populations. *Weed Sci.* 48:356-365.

Sabba, R.P., **T.M. Sterling** and N.K. Lownds. 1998. Effect of picloram on resistant and susceptible yellow starthistle: The role of ethylene. *Weed Sci.* 46:297-300.

**Sterling, T. M.** and Y. Hou. 1997. Genetic diversity of broom snakeweed (*Gutierrezia sarothrae*) and threadleaf snakeweed (*G. microcephala*) populations. *Weed Sci.* 45:674-680.

Fuerst, E. P., **T. M. Sterling**, M. A. Norman, T. S. Prather, G. P. Irzyk, Y. Wu, N. K. Lownds and R. H. Callihan. 1996. Physiological characterization of picloram resistance in yellow starthistle. *Pestic. Biochem. Physiol.* 56:149-161.

Waldrop, M. P., **T. M. Sterling**, R. A. Khan and W. T. Molin. 1996. Fate of prometryn in prometryn-tolerant and -susceptible cotton cultivars. *Pestic. Biochem. Physiol.* 56:111-122.

**Sterling, T. M.**, N. K. Lownds, and L. W. Murray. 1996. Picloram uptake and picloram-induced ethylene production by broom snakeweed as influenced by environment. *J Range Man.* 49:245-250.

**Thompson, D. C.**, J. L. Knight, **T. M. Sterling** and L. W. Murray. 1995. Preference for specific varieties of woolly locoweed by a specialist weevil, *Cleonidius trivittatus* (Say). *Southwestern Entomologist* 20:325-333.

Hou, Y. and **T. M. Sterling**. 1995. Isozyme variation in broom snakeweed (*Gutierrezia sarothrae*). *Weed Sci.* 43:156-162.

**Sterling, T. M.** and H. J. Jochem. 1995. Uptake, translocation and metabolism of picloram and metsulfuron by two genera of locoweed. *Weed Sci.* 43:13-17.

Morrison, R. G., N. K. Lownds and **T. M. Sterling**. 1995. Picloram uptake, translocation and efficacy in relation to water status in Russian knapweed (*Centaurea repens* L.). *Weed Sci.* 43:34-39.

**Sterling, T.M.** 1994. Mechanisms of herbicide absorption across plant membranes and accumulation in plant cells. *Weed Sci.* 42:263-276.

## PROCEEDINGS/ABSTRACTS

Boren, A., S. Fritz, C. Speth, D. Namuth, **T. Sterling** and D. Lee. 2005. A Tale of Two Constructs: Distance Students' Learning Approaches and Motivations. 3rd Annual Hawaii International Conference on Education, Honolulu, February.

Branum, K. S., and **T. M. Sterling**. 2004. Nitrogen response of picloram-resistant yellow starthistle. *Proc. Western Soc. Weed Sci.* 57:8.

Branum, K. S., L. B. Abbott, and **T. M. Sterling**. 2004. Water stress effects on diurnal physiology of African rue. *Proc. Western Soc. Weed Sci.* 57:51.

Vallotton, A. D., L. A. Gibbs, L. B. Abbott, and **T. M. Sterling**. 2004. Uptake and translocation of herbicides in African rue under water stress. *Proc. Western Soc. Weed Sci.* 57:31.

Vallotton, A. D., D. R. Gardner, M. H. Ralphs, and **T. M. Sterling**. 2004. Comparison of three methods for swainsonine detection and quantification in woolly loco. *Soc. Range Management*, 57<sup>th</sup> Annual Meeting.

Namuth, D. M., S. J. Nissen, **T. M. Sterling**, S. M. Fritz, I. Hernandez-Rios, A. Martin, B. Kappler, C. Mallory-Smith, J. A. Dille. 2004. Creation of peer-reviewed online herbicide modes of action lessons and animations for public education. *WSSA Abstracts* 44:85.

**Sterling, T. M.** and **D. C. Thompson**. 2003. Implications of invasive plant variation for weed management. *Invasive Plants in Natural and Managed Systems: Linking Science and Management and 7<sup>th</sup> International Conference on the Ecology and Management of Alien Plant Invasion*, p.85.

Abbott, L. B. and **T. M. Sterling**. 2003. Recovery of African rue seedlings from water stress: Implications for recruitment and invasion. *Invasive Plants in Natural and Managed Systems: Linking Science and Management and 7<sup>th</sup> International Conference on the Ecology and Management of Alien Plant Invasion*, p. 3.

Dyer, W. and **T. M. Sterling**. 2003. Selection and compressed evolution in agroecosystems. *Invasive Plants in Natural and Managed Systems: Linking Science and Management and 7<sup>th</sup> International Conference on the Ecology and Management of Alien Plant Invasion*, p. 26.

Abbott, L. B., **T. M. Sterling**, and L. M. Hite. 2003. Photosynthesis and growth responses of African rue to progressive drought. *SRM Annual Meeting* 96:5.

Abbott, L. B., L. M. Hite, and **T. M. Sterling**. 2003. Physiological responses of African rue to progressive drought. *Proc. Western Soc. Weed Sci.* 56:25.

Bettmann, G. T., H. H. Ratnayaka, Abbott, L. B., and **T. M. Sterling**. 2003. Antioxidant levels of African rue under water stress. *Proc. Western Soc. Weed Sci.* 56:27.

Nissen, S. J., **T. M. Sterling**, D. M. Namuth, S. M. Fritz, A. Martin, B. Kappler, and C. Mallory-Smith. 2003. Teaching herbicide mode of action with lessons and animations available online. *Proc. Western Soc. Weed Sci.* 56:93.

Vallotton, A. D., Abbott, L. B., and **T. M. Sterling**. 2003. African rue seedling response to herbicides applied under drought stress. *Proc. Western Soc. Weed Sci.* 56:26.

Ratnayaka, H. H., **T. M. Sterling**, and W. T. Molin. 2003. Photosynthetic and antioxidative responses in cotton and spurred anoda under progressive drought. *WSSA Abstracts* 43:53.

Amador, R., H. H. Ratnayaka, **T. M. Sterling** and W. T. Molin. 2002. Diurnal patterns of antioxidant systems in cotton and spurred anoda. *ASPB 2002 Supplement*, p. 145.

Ratnayaka, H. H., **T. M. Sterling**, and W. T. Molin. 2002. Antioxidative response of cotton and spurred anoda under progressive drought. *ASPB 2002 Supplement*, p. 143.

Branum, K. S., H. H. Ratnayaka, A. D. Vallotton, and **T. M. Sterling**. 2002. Temperature response of picloram-resistant yellow starthistle (*Centaurea solstitialis* L.). *Proc. Western Soc. Weed Sci.* 55:7.

Vallotton, A. D. and **T. M. Sterling**. 2002. Variation in swainsonine content among extraction methods and between locoweed genera. *Proc. Western Soc. Weed Sci.* 55:18.

Molin, W. T., H. H. Ratnayaka, and **T. M. Sterling**. 2002. Effects of spurred anoda interference on yield and photosynthesis in cotton. *WSSA Abstracts* 41: 71.

Ratnayaka, H. H., **T. M. Sterling**, and W. T. Molin. 2002. Antioxidative responses in cotton and spurred anoda under interference and drought. *WSSA Abstracts* 41: 71.

**Sterling, T. M.**, I. Ray, A. D. Vallotton, and R. P. Sabba. 2002. Recessive inheritance of picloram resistance in yellow starthistle (*Centaurea solstitialis* L.). *WSSA Abstracts* 41: 11.

Ratnayaka, H. H., W. T. Molin, and **T. M. Sterling**. 2001. Oxidative stress tolerance in cotton and spurred anoda under competition and drought. *Amer. Soc. Botany Abstracts* 2001:75.

- Hernandez-Rios, I. and **T. M. Sterling**. 2001. Antioxidant response in prometryn-tolerant and -susceptible cotton varieties. *Proc. Western Soc. Weed Sci.* 54:28.
- Molin, W. T., H. H. Ratnayaka, and **T. M. Sterling**. 2001. Spurred anoda competition in wide row and ultra narrow row cotton. *Proc. Western Soc. Weed Sci.* 54:48.
- Ratnayaka, H., W. T. Molin and **T. M. Sterling**. 2001. Interaction between competition and oxidative stress tolerance in cotton and spurred anoda. *Proc. Western Soc. Weed Sci.* 54:52.
- Vallotton, A. D., R. P. Sabba, I. Ray and **T. M. Sterling**. 2001. Inheritance of picloram resistance in yellow starthistle. *Proc. Western Soc. Weed Sci.* 54:27.
- Hernandez-Rios, I. and **T. M. Sterling**. 2000. Lipid peroxidation as an index of prometryn damage in cotton. *Proc. Western Soc. Weed Sci.* 53:100.
- Kulshreshtha, S. and **T. M. Sterling**. 2000. Variation in amplified chloroplast genes from different locoweed varieties in New Mexico. *Proc. Western Soc. Weed Sci.* 53:15.
- Campanella, M. C., and **T. M. Sterling**. 1999. Photosynthetic rates among broom and threadleaf snakeweed populations. *Proc. West. Soc. Weed Sci.* 52:40.
- Eichler, E. R. and **T. M. Sterling**. 1999. Flowering variation among different broom and threadleaf snakeweed populations. *Proc. West. Soc. Weed Sci.* 52:37.
- Hernandez-Rios, I. and **T. M. Sterling**. 1999. Role of oxidative stress response in cotton tolerance to prometryn. *Proc. West. Soc. Weed Sci.* 52:16.
- Kulshreshtha, S. and **T. M. Sterling**. 1999. Strategy to study the phylogenetic relationship among different varieties of locoweed. *Proc. West. Soc. Weed Sci.* 52:143-144.
- Hou, Y., L. W. Murray, and **T. M. Sterling**. 1999. Phenotypic variation in broom [*Gutierrezia sarothrae* (Pursh) Britt. & Rusby] and threadleaf snakeweed [*G. microcephala* (DC.) Gray] snakeweed. *WSSA Abstracts* 39:20.
- Campanella, M.C., **T.M. Sterling**, and L.W. Murray. 1998. Chlorophyll and water potential variation among broom and threadleaf snakeweed populations. *Proc. West Soc. Weed Sci.* 51:38-39.
- Sterling, T.M.**, W.E. Dyer, M.E.Chaverra, J.K. Pepelnjak, and R.P. Sabba. 1998. Auxin-binding proteins from susceptible and dicamba-resistant kochia accessions. *Proc. West Soc. Weed Sci.* 51:29-30.

Campanella, M. C., **T. M. Sterling**, and **D. A. Thompson**. 1997. The effects of *Walshia miscecolorella* feeding on swainsonine concentrations in silky crazyweed. Proc. Western Soc. Weed Sci. 50:23-24.

Maynard, R. L. and **T. M. Sterling**. 1997. The influence of epicuticular wax on picloram photodegradation. Proc. Western Soc. Weed Sci. 50:80.

Maynard, R. L. and **T. M. Sterling**. 1997. Picloram photodegradation in plant epicuticular wax. Weed Sci. Soc. Am. Abstracts 36:128.

Parreira, R. E., **T. M. Sterling**, **D. A. Thompson**, and L. W. Murray. 1997. Broom and threadleaf snakeweed relative susceptibility to a natural infestation of the long-horned beetle. Proc. Western Soc. Weed Sci. 50:33-34.

Rios-Torres, A., **T. M. Sterling**, and **J. Schroeder**. 1997. Efecto de imazethapyr, imazaquin y chlorimuron en maiz con diferente suel y niveles de humedad. XVIII Congreso Nacional de la Ciencia de la Maleza, November 3 to 7, p. 41.

Rios-Torres, A., **T. M. Sterling**, and **J. Schroeder**. 1997. Efecto de imazethapyr, imazaquin y chlorimuron en hidroponia con diferente pH y potenciales osmoticos. XVIII Congreso Nacional de la Ciencia de la Maleza, November 3 to 7, p. 42.

Sabba, R. P., **T. M. Sterling**, and N. K. Lownds. 1997. Complex genetics of yellow starthistle (*Centaurea solstitialis* L.) resistance to the auxinic herbicides picloram and clopyralid. Weed Sci. Soc. Am. Abstracts 36:124.

Valenzuela-Valenzuela, J., N. K. Lownds, and **T. M. Sterling**. 1997. Clopyralid uptake, translocation and ethylene production in resistant and susceptible yellow starthistle plants. Proc. Western Soc. Weed Sci. 50:36.

Sabba, R. P., **T. M. Sterling** and N. K. Lownds. 1996. Inheritance of yellow starthistle resistance to the auxinic herbicides picloram and clopyralid. Plant Physiol. 111S:117.

Gibbs, L. A., **T. M. Sterling** and N. K. Lownds. 1996. Picloram response by picloram-resistant and -susceptible yellow starthistle in a replacement series and F1 seedlings. Proc. Western Soc. Weed Sci. 49:38.

Maynard, R. L. and **T. M. Sterling**. 1996. Photodegradation of picloram within plant epicuticular wax. Proc. Western Soc. Weed Sci. 49:104.

Murray, M. W., **T. M. Sterling**, and W. T. Molin. 1996. Varietal differences in response of cotton to prometryn. Proc. Western Soc. Weed Sci. 49:91-92.

Rios-Torres, A., **J. Schroeder**, and **T. M. Sterling**. Behavior of three ALS inhibitors in two soils at different moisture levels. Proc. Western Soc. Weed Sci. 49:35-36.

Sabba, R. P., **T. M. Sterling**, and N. K. Lownds. 1996. The role of ethylene in yellow starthistle resistance to the auxinic herbicide picloram. *Proc. Western Soc. Weed Sci.* 49:39.

**Sterling, T.M.** and Y. Hou. 1996. Isozyme variation among broom snakeweed [*Gutierrezia sarothrae* (Pursh) Britt. & Rusby] and threadleaf snakeweed [*Gutierrezia microcephala* (DC.) Gray] populations. *Weed Sci. Soc. Am. Abstracts* 36:73.

Anand, P., W. T. Molin, and **T. M. Sterling**. 1995. Differential tolerance of cotton cultivars to the herbicide prometryn. *Weed Sci. Soc. Am. Abstracts* 35:79.

Gibbs, L. A., M. W. Murray, and **T. M. Sterling**. 1995. Comparison of picloram-resistant and -susceptible yellow starthistle in a replacement series. *Proc. Western Soc. Weed Sci.* 48:26.

Hou, Y. and **T. M. Sterling**. 1995. Isozyme variation of broom and threadleaf snakeweed from four western states. *Proc. Western Soc. Weed Sci.* 48:21-22.

Murray, M. W., **T. M. Sterling**, and W. T. Molin. 1995. Screening for prometryn tolerance in cotton varieties. *Proc. Western Soc. Weed Sci.* 48:41.

Parreira, R. E., **T. M. Sterling**, **D. C. Thompson** and L. W. Murray. 1995. Damage potential of a long-horned beetle on broom and threadleaf snakeweed. *Proc. Western Soc. Weed Sci.* 48:31.

Waldrop, M. P., L. A. Gibbs and **T. M. Sterling**. 1995. Prometryn uptake and translocation by Pima and Upland-type cotton seedlings. *Proc. Western Soc. Weed Sci.* 48:16-17.

Molin, W. T., P. Anand, and **T. M. Sterling**. 1994. Differential tolerance of cotton (*Gossypium* sp.) cultivars to the herbicide prometryn. *Plant Physiol.* 105S:77.

**Sterling, T. M.** and H. J. Jochem. 1994. Mechanisms of differential tolerance in locoweed to picloram and metsulfuron. *Weed Sci. Soc. Am. Abstracts* 34:29.

Hou, Y. and **T. M. Sterling**. 1994. Phenotypic variability in broom snakeweed (*Gutierrezia sarothrae*). *Weed Sci. Soc. Am. Abstracts* 34:29.

Molin, W. T., P. Anand, and **T. M. Sterling**. 1994. Differential tolerance to prometryn in cotton (*Gossypium* sp.). *Weed Sci. Soc. Am. Abstracts* 34:53.

Pedersen, M. P., **T. M. Sterling**, and N. K. Lownds. 1994. Auxin and auxin-like herbicide binding in picloram-susceptible and -resistant yellow starthistle (*Centaurea solstitialis* L.). *Southern Soc. Weed Sci.* 47:246-247.

Hou, Y., and **T. M. Sterling**. 1994. Genotype variation in broom snakeweed (*Gutierrezia sarothrae*) response to picloram. *Southern Soc. Weed Sci.* 47:218-219.

**Sterling, T. M.**, J. A. Parreira, and **D. C. Thompson**. 1994. Consumption differences among woolly loco varieties by a specialist weevil. *Proc. Western Soc. Weed Sci.* 47:17.

**Sterling, T. M.**, N. K. Lownds, and L. W. Murray. 1994. Effect of broom snakeweed stage of plant growth on picloram uptake and picloram-induced ethylene production. *Proc. Western Soc. Weed Sci.* 47:17-18.

#### AGRICULTURAL EXPERIMENT STATION BULLETINS/REPORTS

**Sterling, T. M.** and **D. C. Thompson**, editors. 1999. *Locoweed Research: Updates and Highlights*. New Mexico State Univ., Res. Rep. 730. 88 pages.

Campanella, M. C., **T. M. Sterling**, and **D. C. Thompson**. 1999. *Walshia miscecolorella* caterpillars may alter swainsonine levels in white locoweed. *In Locoweed Research: Updates and Highlights*. Sterling, T. M. and D. C. Thompson, eds., New Mexico State Univ., Res. Rep. 730, pp. 36-37.

**Sterling, T. M.** and H. S. Jochem. 1999. Understanding why white locoweed is more sensitive to herbicides than woolly locoweed. *In Locoweed Research: Updates and Highlights*. Sterling, T. M. and D. C. Thompson, eds., New Mexico State Univ., Res. Rep. 730, pp. 46-47.

**Sterling, T. M.** and H. S. Jochem. 1999. Do differences in locoweed leaf surfaces affect herbicide uptake? *In Locoweed Research: Updates and Highlights*. Sterling, T. M. and D. C. Thompson, eds., New Mexico State Univ., Res. Rep. 730, pp. 55-56.

**Thompson, D. C.**, J. L. Knight, **T. M. Sterling**, and K. T. Gardner. 1999. Locoweed weevils prefer certain varieties of locoweed. *In Locoweed Research: Updates and Highlights*. Sterling, T. M. and D. C. Thompson, eds., New Mexico State Univ., Res. Rep. 730, 48-49.

#### MISCELLANEOUS

Hatzios, K. K., B. Auxier, M. R. Blumhorst, J. M. Campbell, J. M. DiTomaso, W. E. Dyer, R. J. Ehr, S. Harper, M. V. Hickman, R. E. Hoagland, R. S. McAllister, C. A. Nord, R. L. Ratliff, W. F. Simmons, **T. M. Sterling** and J. B. Weber. 1998. *Herbicide Handbook. Supplement to the Seventh Edition*. Weed Science Society of America, Lawrence, KS. 104 pp.

Ahrens, W. H., C. D. Anderson, J. M. Campbell, S. Clay, J. M. DiTomaso, W. E. Dyer, M. T. Edwards, R. J. Ehr, J. R. Frank, M. V. Hickman, E. R. Hill, A. R. Isensee, W. C. Koskinen, W. J. McAvoy, L. W. Mitich, R. L. Ratliff, and **T. M. Sterling**. 1994. *Herbicide Handbook. Seventh Edition*. Weed Sci. Soc. Amer., Champaign, IL, 352 pp.