

CURRICULUM VITAE

NAME

Seshadri, Arathi

ADDRESS

Soil and Crop Sciences
College of Agricultural Sciences

1170 Plant Sciences Building

PHONE

(970) 491-6804

EDUCATION

1997 Ph D, Indian Institute of Science

1991 MS, University of Agricultural Sciences, GKVK

1988 BS, University of Agricultural Sciences, GKVK

OTHER POSITIONS

July 2013 - Present Special Assistant professor, Colorado State University.

September 2006 - July 2013 Special Assistant Professor, Colorado State University.

September 2002 - August 2006 Assistant Professor, Adelphi University, NY.

February 2001 - August 2002 Research Associate, University of Kansas.

June 1998 - April 2000 Research Associate, University of Minnesota.

PUBLISHED WORKS

Refereed Journal Articles

Jorgensen, R., Seshadri, A. (2013). Floral longevity and autonomous selfing are altered by pollination and water availability in *Collinsia heterophylla*. *Annals of Botany*, 112, 821-828.
aob.oxfordjournals.org/content/112/5/821.abstract

Mudd, S. J., Seshadri, A. (2012). Image analysis protocol for detecting and counting viable and inviable pollen grains. *Journal of Plant Studies*, 1, 158-167.

Seshadri, A. (2011). Selective embryo abortion in a perennial tree-legume - a case for maternal advantage of reduced seed number per fruit. *Journal Plant Research*, 124, 675-681.

Quinn, C. F., Prins, C. N., Gross, A. M., Hantzis, L., Reynolds, R. J. B., Freeman, J. L., Yang, S. I., Covey, P. A., Banuelos, G. S., Pickering, I. J., Fakra, S. F., Marcus, M. A., Seshadri, A., Pilon-Smits, E.A.H. (2011). Selenium accumulation in flowers and its effects on pollination. *New Phytologist*, 192, 727-737.

Bedhomme, S., Bernasconi, G., Koene, J., Lankinen, A., Seshadri, A., Michiels, N., Anthes, N. (2009). How does

breeding system variation modulate sexual antagonism? *Biology Letters.*, 5, 717-720.

- Kelly, J. K., Holeski, L. M., Seshadri, A. (2008). The genetic correlation between flower size and water use efficiency in Monkeyflowers. *Evol. Ecol. Research.*, 10, 147-152.
- Naug, D., Seshadri, A. (2007). Sampling rules used by foraging honey bees to exploit the maximum and explore the alternatives in a reward array. *Animal Cognition.*, 10, 117-124.
- Naug, D., Seshadri, A. (2007). Sensory bias of honeybees for exaggerated signals and its implications for the evolution of floral displays. *Biology Letters.*, 3, 635-637.
- Seshadri, A., Ho, G., Spivak, M. (2006). Inefficient task partitioning among non-hygienic honey bees (*Apis mellifera* L.). *Anim. Behav.*, 72, 431-438.
- Seshadri, A., Kelly, J. K. (2004). Corolla morphology facilitates both autogamy and bumble bee pollination in *Mimulus guttatus*. *International Journal of Plant Sciences*, 165, 139-145.
- Kelly, J. K., Seshadri, A. (2003). Inbreeding and the genetic variation of floral traits in *Mimulus guttatus*. *Heredity*, 90, 77-83.
- Seshadri, A., Rasch, A., Cox, C., Kelly, J. K. (2002). Autogamy and floral longevity in *Mimulus guttatus*. *International Journal of Plant Sciences*, 163, 567-573.
- Seshadri, A., Spivak, M. (2001). Influence of colony genotypic composition on the performance of hygienic behaviour in the honey bee (*Apis mellifera* L.). *Anim. Behav.*, 62, 57-66.
- Seshadri, A., Burns, I., Spivak, M. (2000). Ethology of hygienic behaviour in the honey bee, *Apis mellifera ligustica*: behavioural repertoire of hygienic bees. *Ethology*, 106, 365-379.
- Seshadri, A., Ganeshaiyah, K. N., Uma Shaanker, R., Hegde, S. G. (1999). Seed set in *Pongamia pinnata*. *American Journal of Botany*, 86(659-662).
- Seshadri, A., Gadagkar, R. (1998). Cooperative nest building and brood care by nestmates and non-nestmates in *Ropalidia marginata*: implications for the evolution of eusociality. *Oecologia*, 117, 295-299.
- Seshadri, A., Shakarad, M., Gadagkar, R. (1997). Factors affecting the acceptance of alien conspecifics onto nests of the primitively eusocial wasp, *Ropalidia marginata*. *Journal of Insect Behavior*, 10, 343-353.
- Seshadri, A., Shakarad, M., Gadagkar, R. (1997). Social organisation on experimentally assembled colonies of the primitively eusocial wasp, *Ropalidia marginata*: comparison of introduced and natal wasps. *Insectes Sociaux.*, 44, 139-146.
- Seshadri, A., Ganeshaiyah, K. N., Uma Shaanker, R., Hegde, S. G. (1996). Factors affecting embryo abortion in *Syzygium cuminii* (L.) Skeels (Myrtaceae). *International Journal of Plant Sciences*, 157, 49-52.

Non-Refereed Journal Articles

- Seshadri, A., Vandever, M. Assessing native bee biodiversity in an agriculturally dominated landscape: a case of utilizing conservation lands. *Basic and Applied Ecology*.
- Seshadri, A., Bjostad, L. B., Bernklau, E. J. Effects of drought stress on the nutritive value of pollen in Canola. *Journal of Plant-Animal interactions*.

Seshadri, A., O'Brien, C. Pollinator diversity in Crop fields and Pollinator Habitats. *Journal of Pollination Ecology*.

Seshadri, A. Urban agriculture and pollinator sustainability. *Basic and Applied Ecology*.

Seshadri, A., Byrne, P. F. Variation in spikelet fertility under drought stress in 6 selected wheat genotypes. *Journal of Experimental Botany*.

Seshadri, A., Smith, T., Mei, A. Reproductive functions as affected by abiotic stress in *Collinsia heterophylla*, a hermaphroditic annual flowering plant. *Royal Society Open Science*.

Seshadri, A. (2012). A comparison of achene morphology in dandelions growing in urban landscape and open meadows. *Journal of Plant Studies*, 1, 40-46.

AES Report/Bulletin

Byrne, P. F., Seshadri, A., Gaines, T. *GM Crops: Environmental Benefits and Concerns*. CSU Agricultural Experiment Station.

PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS

November 14, 2015, "Variation in nutrient composition of bee pollen from *Apis mellifera* colonies under crop drought stress", Annual Meeting of Entomological Society of America, Entomological Society of America, (Presenter) Seshadri, A.

July 29, 2015, "Modulation of autonomous selfing success and the timing of self-pollination under water stress in *Collinsia heterophylla*", Annual Meeting of Botanical Society of America, Botanical Society of America, (Presenter) Mei, A.

October 21, 2014, "Effect of drought stress on floral traits and honeybee foraging", Annual Meeting NAPPC 2014, North American Pollinator Protection Campaign, Washington DC.

April 2014, "Anther dehiscence pattern and pollen tube growth under water stress in *Collinsia heterophylla*", Celebrating Undergraduate Research and Creativity, Colorado State University, Fort Collins.

April 2014, "Patterns of embryo abortion in common bread wheat (*Triticum aestivum*)", Celebrating Undergraduate Research and Creativity, CSU, Fort Collins.

April 15, 2014, "Patterns of embryo abortion in common bread wheat (*Triticum aestivum*)", Celebrate Undergraduate Research and Creativity research forum, Colorado State University, Colorado State University.

August 13, 2013, "Inheritance of stress-mediated floral trait responses in *Collinsia heterophylla*", Annual Meeting of Ecological Society of America, Ecological Society of America, (Presenter) Smith, T., Minneapolis.

July 11, 2013, "How does maternal abiotic stress affect offspring reproductive traits?", Plant Signalling and Behaviour, (Presenter) Seshadri, A., Vancouver.

April 10, 2013, "Pollinator diversity and sustenance of an important ecosystem service", IGNITE Biodiversity, SOGES CSU, Fort Collins, CO.

February 16, 2013, "Pollinators in your backyard", Adult education class, Gardens of the Spring Creek, Fort Collins, CO.

COLLABORATIVE & INTEGRATIVE INTERDISCIPLINARY SCHOLARSHIP

2015-2016

Team taught a graduate level class (ECOL 592 - Ecology of Food Systems) with researchers from CVMBS, CLA and CAG

Submitted an interdisciplinary research proposal to NSF that includes researchers from the Department of Sociology (CLA) and Department of Soil and Crop Sciences (CAG)

Sustained interactions with the One Health Initiative on campus to establish research projects on Short supply chain food systems

Working with researchers from Department of Social Work to establish research projects in India that bring together urban agriculture and beekeeping to improve status of women and children through alternative income generation.

OTHER ACTIVITIES/ACCOMPLISHMENTS – PUBLICATIONS/SCHOLARLY RECORD

(February 2014 - March 2014). Training, "Kuali Financial Services COEUS Software Testing," Colorado State University, Fort Collins, Colorado, United States.

TEACHING:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u>Cr. Hrs.</u>	<u>Enrollment</u>
2016	Spring	SOCR475 - Global Challenges in Plant and Soil Science	3	14
2015	Fall	ECOL592 - Interdisciplinary Seminar in Ecology	3	14
2015	Spring	Pollination Biology	3	30
2015	Spring	SOCR415 - Pollinator Management in Agroecosystems	1	27
2015	Spring	SOCR784 - Supervised College Teaching	18	2
2015	Spring	SOCR699 - Thesis	18	14
2014	Fall	BSPM596 - Group Study	3	1
2014	Fall	SOCR699 - Thesis	18	9
2013	Fall	SOCR100 - General Crops	4	60
2013	Fall	SOCR100 - General Crops	4	60
2012	Fall	BZ104 - Basic Concepts of Plant Life (GT-SC1)	3	71
2012	Spring	BZ104 - Basic Concepts of Plant Life (GT-SC2)	3	153
2011	Fall	BZ104 - Basic Concepts of Plant Life (GT-SC1)	3	160
2011	Spring	BZ104 - Basic Concepts of Plant Life (GT-SC2)	3	194
2010	Spring	BZ104 - Basic Concepts of Plant Life (GT-SC2)	3	193
2009	Summer	LIFE103 - Biology of Organisms-Animals and Plants	4	21
2009	Spring	BZ104 - Basic Concepts of Plant Life (GT-SC2)	3	180
2008	Summer	LIFE103 - Biology of Organisms-Animals and Plants	4	21
2008	Spring	BZ104 - Basic Concepts of Plant Life (GT-SC1)	3	208
2007	Fall	BZ104 - Basic Concepts of Plant Life (GT-SC1)	3	178

Guest Lectures:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u># of Guest Lectures</u>	<u>Delivery Mode</u>
2015	Fall	SOCR100 - General Crops	1	Face to Face

2015	Spring	NR440 - Practicing Sustainability (Capstone course)	1	Face to Face
2014	Fall	SOCR100 - General Crops	1	Face to Face

Evidence of Teaching Effectiveness (Annual Input)

Other Evidence

Fall 2013, SOCR 100–General Crops
 Taught only once in Fall 2013

Tenure and Promotion Evidence of Teaching Effectiveness (Tenure and Promotion Input)

Development of New Courses

Pollinator Management for Agroecosystems SOCR 415 is a new course developed and offered during Spring 2015

Development of New Teaching Techniques

Integration of Service Learning

Conference/Workshop Assessments

Participation in Professional Development Activities Related to Teaching

Professional Consultation Related to Teaching

Other Evidence

EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS

Meeting

Pollinators – sustaining an important ecosystem service. Longmont, Colorado. Number of times program was made: 2. Total number of participants: 10. Percent Responsible: 10%. 1st Quarter 2014.

Presentation

Pollinators - Sustaining an important ecosystem service. Adult, Durango, CO. Number of times program was made: 1. Total number of participants: 30. Percent Responsible: 50%. 2nd Quarter 2015.

Pollinator plants for Wetlands. Youth, Windsor, Colorado. Number of times program was made: 1. Total number of participants: 10. Percent Responsible: 10%. 1st Quarter 2014.

Workshop

Bee Pollinator Landscaping for Urban Sustainability – Bee PLUS. Adult, Fort Collins. Number of times program was made: 1. Total number of participants: 55. Percent Responsible: 100%. 2nd Quarter 2015.

COMMITTEES

Biodiversity Working Group, (September 2014 - Present).

Kuali COEUS training, (February 2014).

Resident Instruction, (January 20, 2016 - Present).

Global Biodiversity Center, (December 15, 2015 - Present).

Seed Technology Education Program (STEP), (September 1, 2014 - Present).

Crop Functional Genomics Search Committee, (September 2014 - April 2015).

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Entomological Society of America. (January 2015 - Present).

North American Section of International Union for Study of Social Insects. (January 2015 - Present).

North American Pollinator Protection Campaign. (October 2013 - Present).

Society for Study of Evolution. (May 2012 - Present).

Botanical Society of AMerica. (May 2007 - May 2012).

Member, Entomological Society of America. (January 2015 - Present).

Member, IUSSI - International Union for the Study of Social Insects. (August 2013 - Present).

Reviewer, Book, Plant Science Bulletin. (July 15, 2015 - February 28, 2016).

Reviewer, Journal Article, Entomological News. (December 15, 2015 - January 2016).

Reviewer, Journal Article, Journal of Pollination Ecology. (June 15, 2015 - January 2016).

Reviewer, Journal Article, PLoS ONE. (June 15, 2015 - January 2016).

Task Force Member, North AMerican Pollinator Protection Campaign, Washington, DC. (October 23, 2014 - October 21, 2015).

Task Force Member, North AMerican Pollinator Protection Campaign, Washington, DC. (October 23, 2014 - October 21, 2015).

Reviewer, Grant Panel, USDA NIFA. (June 1, 2015 - September 1, 2015).

Reviewer, Ad Hoc Reviewer, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). (June 1, 2015 - August 1, 2015).

Reviewer, Journal Article, Science of the total environment. (June 15, 2015 - July 2015).

Task Force Member, North AMerican Pollinator Protection Campaign, Washington, DC. (October 21, 2013 - October 2014).

Reviewer, Journal Article, Behavioural Ecology and Sociobiology. (August 15, 2014 - August 2014).

Reviewer, Grant Panel, USDA NIFA Grant Review Panel, Washington DC, DC. (June 16, 2014 - August 2014).

Reviewer, Journal Article, PLoS ONE. (June 15, 2014 - June 2014).

Reviewer, Journal Article, Journal of Plant Biology. (March 15, 2014 - March 2014).

OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH

Guest Speaker, Four Corners Beekeepers Association, Durango, CO. (June 6, 2015 - June 8, 2015).

Program Coordinator, Bee Pollinator Landscaping for Urban Sustainability – Bee PLUS, Fort Collins, CO. (April 24, 2015).

Guest Speaker, Mountain High Beekeepers Cooperative, Longmont, Colorado. (February 2014 - February 2015).

K-12 Outreach, Roots and Shoots club, Wellington, Colorado. (March 2014).
