

Sarada Krishnan
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EDUCATION:

Ph.D. Student - Conservation Biology

University of Colorado, Boulder, Colorado

August 2005 – Present

- Currently enrolled in the doctoral program
- Research focus will be on conservation genetics of endangered Madagascar flora

MS Horticulture

Colorado State University, Fort Collins, Colorado

August 1987 – December 1989

- MS Thesis – Propagation of four native drought tolerant shrubs – *Ceanothus* spp. and *Shepherdia* spp.
- Research – For Masters thesis, research was conducted on the propagation of 4 drought tolerant woody shrubs native to Colorado – *Ceanothus fendleri*, *C. velutinus*, *Shepherdia canadensis*, and *S. rotundifolia*. Propagation methods involved seed germination, cuttings, and tissue culture to determine the best method for each species. The goal of the research was to develop propagation protocols for these under-used native shrubs, thus making it easier for commercial propagators to promote them to home gardeners.

BS Horticulture

Tamil Nadu Agricultural University, Coimbatore, India

1981 - August 1985

The emphasis of the undergraduate program was mainly on tropical and sub-tropical horticulture with some training in temperate crops. Received training in coffee and tea cultivation, entomology, plant pathology, and plant nutrition. Enrolled in a farm-training program offered through the horticultural extension service.

PROFESSIONAL EXPERIENCE:

Director of Horticulture and Conservation

Butterfly Pavilion, Westminster, Colorado

May 2000 – Present

Responsibilities and achievements:

- Responsible for overseeing the horticulture department and the horticulture budget. Horticultural areas include the tropical conservatory and an outside landscape of 10.5 acres with habitat gardens, cactus and succulent garden, annual

- beds, and a nature trail. Maintain all the plant collections in these areas and design and develop seasonal displays.
- As part of the Butterfly Pavilion's management team, active participation in the institution's decision-making process.
 - Develop horticultural public programs, horticultural educational programs, develop and update horticultural information on the web-site, write articles, and work with other team members on special projects.
 - As a member of the Butterfly Pavilion's Exhibit Committee, served as the Future Exhibit Search Committee Chair and was involved in researching exhibit companies and developing criteria for rating exhibits for the new exhibit space from 2002 - 2004.
 - Developed the "Plant Conservation Day" program in the spring of 2003, which is now conducted as an annual event to educate the public the importance of plant conservation. As part of this event, coordinate the annual plant sale and educational seminars.
 - Published the "Tropical Plant Guide" in 2001 (revised version in 2005) and Butterfly Pavilion's Butterfly Gardening: A Guide for Colorado Gardeners" in 2003. A percentage of the profit from sale of this book is donated to Denver Urban Gardens to create habitat gardens in urban areas.
 - Initiate and develop conservation programs.
 - Write grants for horticultural and conservation programs.
 - Develop and implement the Senior Butterfly Gardening program. This annual program promotes learning and interaction among seniors while improving their mental and physical well being, self-esteem, and a sense of ownership of their surroundings.
 - Develop plant-related classes for our volunteer training program and teacher workshops.
 - Involvement in creating habitat gardens in schools and other community projects.
 - Started the Big Dry Creek Nature Trail Shortgrass Prairie Restoration project in 2004. The project is anticipated to be completed in 4 – 5 years based on funding.
 - Developed an educational exhibit to use in trade shows that received first place at the 2004 Golden Flower Show and second place at the 2003 Colorado Home & Garden Show.
 - Develop professional partnerships with other non-profit organizations, park horticulturists and green industry professionals.
 - Supervise full-time and seasonal staff and horticulture volunteers.
 - Put together the Horticulture Department Procedures Manual in 2004.
 - Serve as Butterfly Pavilion liaison with Partners for Colorado Native Plants and other conservation organizations.
 - Registered the Butterfly Pavilion as a supporter of the Botanic Gardens Conservation International's International Agenda for Botanic Gardens in Conservation" and a cooperator of the Plant Conservation Alliance.

Plant Tissue Culture Consultant

Tagawa Greenhouses, Inc., Brighton, Colorado
 January 2004 – January 2005

- Design plant tissue culture experiments.

- Train staff on tissue culture procedures by developing educational programs.
- Develop protocols for commercial tissue culture production.

Production Planner

Tagawa Greenhouses, Inc., Brighton, Colorado

March 1997 – April 2000

- Responsible for planning the finished crop programs of the company, which included Spring/Summer, Fall, Poinsettia, Bulb, Easter Lily, Shamrock, and other special requests like foliage and flowering programs.
- Planning included crop scheduling, annual space forecasting, ordering all plant material and plant labels required for all the different programs, providing the various production groups with weekly planting and maintenance schedules, and coordinating movement of product between all the different facilities owned by the company, which was approximately 1.5 million square feet of greenhouse space.
- Reports included weekly Space Utilization Report and Pansy Plug Quality Grade Report during the Pansy season.
- Coordinated research on perennial seed germination for the Perennial Plug Program in 1998.
- Involved in Geranium research project in association with Fischer, USA and Colorado State University.

Research Associate

Department of Bio Agricultural Sciences

Colorado State University, Fort Collins, CO

March 1997 – April 2000

- Worked in Dr. Ranu's lab on Tagawa Greenhouses' Geranium regeneration project. Work involved tissue culture of geraniums, media and stock solution preparation and maintenance of cultures.

Laboratory Manager

Colorado Cuttings, Lafayette, CO

July 1990 – December 1991

- Started a new tissue culture lab and was responsible for managing the lab and coordinating research of a number of ornamental crops that had not been worked with in tissue culture before and establishing suitable protocols for their commercial propagation by tissue culture.
- Achieved good results within six months of starting the lab and started commercial production of *Hamelia patens*.
- Responsibilities also included ordering lab supplies, inventory, maintaining records, and performing ELISA tests for Tomato Spotted Wilt virus (both Impatiens and Lettuce strains) periodically in crops susceptible to this virus.
- Supervised two full time lab technicians and 2 - 3 laborers in the greenhouse when tissue cultured plantlets were planted.

Manager of Plant Tissue Culture & Virus Elimination Facility

Denver Wholesale Florists, Aurora, Colorado

February 1990 – June 1990

- Responsibilities included ordering lab supplies, mixing stock solutions and media, maintenance and transfer of all cultures, keeping records, performing clonal studies on Carnation to determine suitability of clones of a variety for commercial cut flower production, and culturing meristems for virus elimination after heat therapy.

Laboratory Assistant

Department of Horticulture, Colorado State University, Fort Collins, Colorado

January 1988 - May 1989

- Responsibilities included setting up lab for the undergraduate Plant Propagation course, performing statistical analyses of research projects, and maintenance of tissue culture laboratory.

PUBLICATIONS:

- Krishnan, Sarada. 2003. Butterfly Pavilion's Butterfly Gardening: A Guide for Colorado Gardeners.
- July 2001. Tropical Plant Guide (Butterfly Pavilion internal publication)
- Various articles for the Butterfly Pavilion's internal publications (Flutterings, Buzz and Splat).
- Various articles on perennials for the Denver Newspaper Agency as part of the Colorado Nursery & Greenhouse Association's Perennial Committee.
- Articles for the Association of Zoological Horticulture (AZH) Newsletter.
- Krishnan, Sarada and Harrison Hughes. 1991. Asexual propagation of *Shepherdia canadensis* and *Shepherdia rotundifolia*. Journal of Environmental Horticulture 9:218-220
- Krishnan, Sarada, Kurt Shultz and Harrison Hughes. 1991. Asexual propagation of *Shepherdia canadensis* and *Shepherdia rotundifolia*. HortScience 25(9):94 (Abstract).
- Krishnan, Sarada, Bahman Pirastah and Harrison Hughes. 1990. Asexual propagation of *Ceanothus velutinus* and *Ceanothus fendleri*. HortScience 25(9):94 (Abstract).

PROFESSIONAL AFFILIATIONS:

- Vermont Ecosphere Project – Advisory Council for this project from 2005 (www.vermontecosphere.org).
- Association of Zoological Horticulture (AZH) – 2002/2003 Board member-at-large (1-year term); 2003 – 2006 Board member at large (3-year term); 2002 – 2005 Chair of Information and Survey Committee; Member of Conservation Committee. As chair of the AZH Information & Survey Committee, published the 2003 Animal Browse & Enrichment Survey in MS Access database in Oct. 2004.
- American Association of Botanical Gardens and Arboreta – Individual member and member of the Conservatory Committee.
- American Zoo and Aquarium Association – Individual member

- Nature Conservancy – Volunteer of Nature Conservancy’s Phantom Canyon Preserve
 - Colorado Native Plant Society; Chair of the Conservation Committee from 2005 – 2005 activities involved participation in the Southeast Boulder County Open Space Collaborative Group in planning open space restoration along Northwest Parkway, 2005 rare orchid monitoring project, Osha (*Ligusticum porteri*) monitoring project, and native seed collecting for Rocky Flats restoration.
 - Colorado Nursery and Greenhouse Association - Perennial Plant Committee; 2004 - Vice Chair of the committee (1-year term); 2005/2006 – Chair of the committee (2-year term).
 - Partners for Colorado Native Plants – involved in the Rare Orchid Monitoring Project.
 - Colorado Weed Network.
 - Master Gardener with Adams County Extension Service from 1992 - 1995.
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GRANTS:

- 2000/2001 SCFD Discretionary Fund - \$6,695 to develop Tropical Plant Guide
- 2001/2002 SCFD Discretionary Fund - \$10,000 to develop Colorado Butterfly Gardening Book
- 2002/2003 SCFD Discretionary Fund – Additional \$4,000 to complete the Colorado Butterfly Gardening Book
- 2002/2003 SCFD Discretionary Fund - \$3,500 to develop the annual event “Plant Conservation Day & Plant Sale”
- 2002/2003 SCFD Discretionary Fund - \$3,000 for the Big Dry Creek Nature Trail Shortgrass Prairie Restoration Project. Funds were extended to 2004.
- 2003/2004 – SCFD Discretionary Fund – Additional \$1,000 to enhance the annual “Plant Conservation Day & Plant Sale” event
- 2003/2004 - SCFD Discretionary Fund - \$2,500 to develop plant identification labels and signage in the conservatory and outdoor gardens
- 2004 Jefferson County Open Space Conservation Trust Fund - \$5,700 for the Big Dry Creek Nature Trail Shortgrass Prairie Restoration Project
- 2004/2005 - SCFD Discretionary Fund - \$4,000 for the Big Dry Creek Nature Trail Shortgrass Prairie Restoration Project (Phase 2)
- 2004/2005 - SCFD Discretionary Fund - \$3,800 for developing interpretive signs
- 2004/2005 - SCFD Discretionary Fund - \$2,000 for the Senior Butterfly Gardening Program
- 2004/2005 - SCFD Discretionary Fund - \$1,200 for the annual “Plant Conservation Day & Plant Sale” event
- 2004 Association of Zoological Horticulture Conservation Grant - \$4,000 for the Big Dry Creek Nature Trail Shortgrass Restoration Project (Phase 2)
- 2005 Jefferson County Open Space Conservation Trust Fund - \$5,000 for the Big Dry Creek Nature Trail Shortgrass Prairie Restoration Project (Phase 2)
- 2005 Association of Zoological Horticulture Conservation Grant - \$3,500 for the 2006 Rare Orchid Monitoring Project

- 2005/2006 – SCFD Discretionary Fund - \$3,700 for the Senior Butterfly Gardening Program
 - 2005/2006 – SCFD Discretionary Fund - \$2,000 for developing a Butterfly Gardening information handout
 - 2005/2006 – SCFD Discretionary Fund - \$4000 for the Big Dry Creek Nature Trail Shortgrass Prairie Restoration Project (Phase 3)
 - 2005/2006 – SCFD Discretionary Fund - \$2,200 for developing a weed manual as a resource for staff and volunteers
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PROFESSIONAL WORKSHOPS:

- October 2004 – Association of Zoological Horticulture - Habitats of the Southern Rocky Mountains (two-day workshop)
- October 2004 – Mountain States Employers Council, Inc. – Wage & Hour Workshop 101
- January 2005 – American Association of Botanic Gardens & Arboreta – Conservatory Symposium (two-day workshop)
- June 2005 – Center for Plant Conservation’s Applied Plant Conservation Training (week-long workshop)