

**Valerie Creaser Pence**  
 Director of Plant Research  
 Center for Conservation and Research of Endangered Wildlife (CREW)  
 Cincinnati Zoo & Botanical Garden

**Education/Training**

Institution and Location	Degree	Year(s)	Field of Study
Mount Holyoke College, South Hadley, MA	B.S.	1972	Botany
Northwestern University, Evanston, IL	M.S.	1973	Plant Physiology
Northwestern University, Evanston, IL	Ph.D.	1977	Plant Developmental Physiology

**Positions and Honors**

<u>Board Member</u> , Lloyd Library and Museum, Cincinnati, OH 45220	2014-present
<u>Plant Biotechnology Program Chair</u> , Society for In Vitro Biology	2014
<u>Fellow Award</u> , Society for In Vitro Biology	2011
<u>Star Award</u> , Center for Plant Conservation	2010
<u>Zone Conservation Commendation</u> , Garden Club of America	2009
<u>Conservation Award</u> , Association of Zoological Horticulture	1998
<u>Interim Director</u> , CREW, Cincinnati Zoo & Botanical Garden, Cincinnati, OH	1995
<u>Director of Plant Research</u> , CREW, Cincinnati Zoo & Botanical Garden, Cincinnati, OH	1987-present
<u>Lecturer</u> , University of Cincinnati Evening College, Cincinnati, OH	1986-1995
<u>Senior Research Associate</u> , University of Cincinnati, Cincinnati, OH	1980-1988
<u>Wilson Popenoe Award</u> , American Society for Horticultural Science	1980
<u>Post-Doctoral Fellow</u> , University of Florida, Gainesville, FL	1979-1980
<u>Post-Doctoral Researcher</u> , Purdue University, West Lafayette, IN	1977-1979

**Most Recent Book Chapters and Peer-Reviewed Manuscripts (from over 180 papers and abstracts)**

- Pence VC. 2018. Growth of fern gametophytes after 20 years of storage in liquid nitrogen. *Fern Gazette* 20: 337-346.
- Ballesteros D and VC Pence. 2018. Fern conservation: spore, gametophyte, and sporophyte *ex situ* storage, *in vitro* culture, and cryopreservation. In: Fernandez H (ed), *Current Advances in Fern Research*. Springer International Publishing AG, New York, pp. 227-249.
- Skopec MM, J Lewinsohn, T Sandoval, C Wirick, S Murray, V Pence, and L Witham. 2017. Managed grazing is an effective strategy to restore habitat for the endangered autumn buttercup (*Ranunculus aestivalis*). *Restoration Ecology* 26: 629-635.
- Pence VC, M Philpott, TM Culley, B Plair, SR Yorke, K Lindsey, A-C Vanhove, D Ballesteros. 2017. Survival and genetic stability of shoot tips of *Hedeoma todsenii* R.S. Irving after

- long-term cryostorage. *In Vitro Cellular and Developmental Biology—Plant* 53(6), October 2017.
- Smith P and V Pence. 2017. The role of botanic gardens in *ex situ* conservation. In: Blackmore, S. and S. Oldfield. (eds), *Plant Conservation Science and Practice*. Cambridge University Press, pp. 102-133.
- Pence VC, LR Finke, MF Chaiken. 2017. Tools for the *ex situ* conservation of the threatened species, *Cycladenia humilis* var. *jonesii*. *Conservation Physiology* 5 10.1093/conphys/cox053.
- Brennan AN, VC Pence, MD Taylor, and M Westwood. 2017. *In vitro* growth responses of 12 North American oak species using two different media. *HortTechnology* 27(5), Oct. 2017.
- Ballesteros D and VC Pence. 2017. Survival and death of seeds during liquid nitrogen storage: A case study on seeds with short lifespans. *CryoLetters* 38 (4): 278-289.
- Pence VC. 2015. Propagation and cryopreservation of *Asplenium scolopendrium* var. *americanum*, the American hart's-tongue fern. *American Fern Journal* 105: 211-225.
- Pence VC. 2014. *In vitro* propagation and cryopreservation of the endangered filmy fern, *Trichomanes punctatum* subsp. *floridanum* (Hymenophyllaceae). *Fern Gazette* 19: 311-321.
- Pence VC. 2014. In vitro methods and cryopreservation: Tools for endangered exceptional species preservation and restoration. *Acta Horticulturae* 1039: 73-79.
- Pence VC. 2014. Tissue cryopreservation for plant conservation: potential and challenges. *International Journal of Plant Science* 175(1): 40-45.
- Pence VC. 2013. In vitro methods and the challenge of exceptional species for Target 8 of the GSPC. *Annals of the Missouri Botanical Garden* 99(2): 214-220.
- Kramer A, and V Pence. 2012. The challenges of *ex situ* conservation for threatened oaks. *International Oak Journal (Journal of the International Oak Society)* 23: 91-108.
- Pence VC, DD Taylor, BL Plair, SM Charls, and JR Clark. 2012. Micropropagation, cryopreservation, and outplanting of *Minuartia cumberlandensis*, the Cumberland sandwort. *Journal of the Kentucky Academy of Sciences* 72: 91-99.
- Haskins K and VC Pence. 2012. Transitioning plants to new environments: Beneficial applications of soil microbes. In: J. Maschinski and K. Haskins, *Managing Eden: Plant Reintroduction in a Changing Climate: Promises and Perils*. Center for Plant Conservation, Island Press. Pp. 89-107.
- Pence VC, and F Engelmann. 2011. Collecting in vitro for genetic resources conservation. In: Guarino L., V. Ramanatha Rao, and E. Goldberg (eds.), *Collecting Plant Genetic Diversity: Technical Guidelines*. 2011 update. Bioversity International, Rome. Available online: [http://cropgenebank.sgrp.cgiar.org/index.php?option=com\\_content&view=article&id=661](http://cropgenebank.sgrp.cgiar.org/index.php?option=com_content&view=article&id=661)
- Pence VC. 2011. The possibilities and challenges of in vitro methods for conservation. *Kew Bulletin* 65: 539-547.
- Pence VC. 2011. Evaluating costs for in vitro propagation and preservation of endangered plants. *In Vitro Cellular and Developmental Biology -- Plant* 47: 176-187. View abstract at: <http://link.springer.com/article/10.1007%2Fs11627-010-9323-6>
- Reed BM, V Sarasan, M Kane, E Bunn, and VC Pence. 2011. Biodiversity conservation and conservation biotechnology tools. *In Vitro Cellular and Developmental Biology -- Plant* 47: 1-4.
- Pence VC, GD Winget, KL Lindsey, BL Plair and SM Charls. 2009. *In vitro* propagation, cryopreservation, and genetic analysis of the endangered *Hedeoma todsenii* (Lamiaceae). *Madroño* 56: 221-228.

