

CREW's Most Recent Peer-reviewed Plant Scientific Publications

- Ballesteros, D., Canón-Prieto, J. L., Nebot, A., Pritchard, H. W., Tu, Y., Chen, H., Folgado, R., **Winkeljohn, M., Philpott, M., Pence, V.**, Peralta, A. M. L., Prieto, L., & Foster, J. (2025). Conserving the genetic resources of exceptional plant species through pollen banking. In *Conservation of Plant Genetic Resources* (pp. 109–133). Springer, Singapore. https://doi.org/10.1007/978-981-96-8331-4_4
- Ballesteros, D., Davies, R. M., Peach, J. L., & **Pence, V. C.** (2025). Longevity, Cryopreservation, and Propagation of Carnivorous Plants Seeds: Insights From 13 Species in Long-Term Ex situ Collections. *Annals of Botany*, 111-128. <https://doi.org/10.1093/aob/mcaf058>
- Philpott, M.**, Vanhove, A.-C., **Chaiken, M.**, & **Pence, V. C.** (2025). Long-term survival after cryopreservation of the endangered exceptional species *Crotalaria avonensis*. *Cryobiology*, 119, 105249. <https://doi.org/10.1016/j.cryobiol.2025.105249>
- Ree, J. F., Powell, C., Folgado, R., **Pence, V. C.**, Walters, C., & Maschinski, J. (2025). Establishing tissue culture lines from mature Nuttall's scrub oak (*Quercus dumosa* Nutt.) for ex situ conservation. *In Vitro Cellular & Developmental Biology - Plant*, 1–15. <https://doi.org/10.1007/s11627-024-10475-4>
- Wedig, J., Pence, V., Finke, L., Chaiken, M.**, Pinhas, A., & Voorhees, R. (2025). Gradients in Humidity and Water Availability in Plant Tissue Culture Tubes. *International Journal of Biology*, 17(1), 45-58. <https://doi.org/10.5539/ijb.v17n1p45>
- Nagel, M., **Pence, V.**, Ballesteros, D., Lambardi, M., Popova, E., & Panis, B. (2024). Plant cryopreservation: Principles, applications, and challenges of banking plant diversity at ultralow temperatures. *Annual Review of Plant Biology*, 75. <https://doi.org/10.1146/annurev-arplant-070623-103551>
- Pence, V. C.**, & Bruns, E. B. (2024). Scratching the surface: The in vitro research that will be critical for conserving exceptional plants to scale. *In Vitro Cellular & Developmental Biology - Plant*. <https://doi.org/10.1007/s11627-023-10405-w>
- Ree, J. F., Powell, C., Folgado, R., **Pence, V. C.**, Walters, C., & Maschinski, J. (2024). Development of a Micropropagation Protocol for the Ex Situ Conservation of Nuttall's Scrub Oak (*Quercus dumosa*). *Plants*, 13(8), Article 8. <https://doi.org/10.3390/plants13081148>
- Pence, V. C.**, & Bruns, E. B. (2022). The Tip of the Iceberg: Cryopreservation Needs for Meeting the Challenge of Exceptional Plant Conservation. *Plants*, 11(12), 1528. <https://doi.org/10.3390/plants11121528>
- Pence, V. C.**, Bruns, E. B., Meyer, A., Pritchard, H. W., Westwood, M., Linsky, J., Gratzfeld, J., Helm-Wallace, S., Liu, U., Rivers, M., & Beech, E. (2022). Gap analysis of exceptional species—Using a global list of exceptional plants to expand strategic ex situ

- conservation action beyond conventional seed banking. *Biological Conservation*, 266, 109439. <https://doi.org/10.1016/j.biocon.2021.109439>
- Pence, V. C.**, Meyer, A., Linsky, J., Gratzfeld, J., Pritchard, H. W., Westwood, M., & Bruns, E. B. (2022). Defining exceptional species—A conceptual framework to expand and advance *ex situ* conservation of plant diversity beyond conventional seed banking. *Biological Conservation*, 266, 109440. <https://doi.org/10.1016/j.biocon.2021.109440>
- Philpott, M., Pence, V. C.**, Bassüner, B., Clayton, A. S., Coffey, E. E. D., Downing, J. L., Edwards, C. E., Folgado, R., Ligon, J. J., Powell, C., Ree, J. F., Seglias, A. E., Sugii, N., Zale, P. J., & Zeldin, J. (2022). Harnessing the power of botanical gardens: Evaluating the costs and resources needed for exceptional plant conservation. *Applications in Plant Sciences*, 10(5), e11495. <https://doi.org/10.1002/aps3.11495>
- Philpott, M., Pence, V. C.**, & Coffey, E. E. D. (2022). Building capacity in the conservation of exceptional plant species. *Applications in Plant Sciences*, 10(5), e11498. <https://doi.org/10.1002/aps3.11498>
- Pritchard, H. W., Sershen, Tsan, F. Y., Wen, B., Jaganathan, G. K., Calvi, G., **Pence, V. C.**, Mattana, E., Ferraz, I. D. K., & Seal, C. E. (2022). Chapter 19—Regeneration in recalcitrant-seeded species and risks from climate change. In C. C. Baskin & J. M. Baskin (Eds.), *Plant Regeneration from Seeds* (pp. 259–273). Academic Press. <https://doi.org/10.1016/B978-0-12-823731-1.00014-7>
- Winkeljohn, M., Pence, V. C.**, & Culley, T. M. (2022). Improving culture initiation of mature oak shoots through use of silver thiosulfate. *Applications in Plant Sciences*, 10(5), e11497. <https://doi.org/10.1002/aps3.11497>
- Pence, V. C.**, & **Chaiken, M. F.** (2021). Shoot tip cryopreservation as a conservation tool for species of *Quercus*: Effects of species and environment on recovery. *Cryoletters*, 42(3), 159–167.
- Walters, C., & **Pence, V. C.** (2021). The unique role of seed banking and cryobiotechnologies in plant conservation. *Plants, People, Planet*, 3(1), 83–91. <https://doi.org/10.1002/ppp3.10121>
- Pence, V. C.**, Ballesteros, D., Walters, C., Reed, B. M., **Philpott, M.**, Dixon, K. W., Pritchard, H. W., Culley, T. M., & Vanhove, A.-C. (2020). Cryobiotechnologies: Tools for expanding long-term *ex situ* conservation to all plant species. *Biological Conservation*, 250, 108736. <https://doi.org/10.1016/j.biocon.2020.108736>
- Pence, V. C.**, **Finke, L. R.**, & Niedz, R. P. (2020). Evaluating a DOE screen to reduce hyperhydricity in the threatened plant, *Cycladenia humilis* var. *Jonesii*. *In Vitro Cellular & Developmental Biology: Plant*, 56(2), 215–229. <https://doi.org/10.1007/s11627-019-10038-y>