

David L Nieland

Subject: PhD position in Conservation Genomics at NDSU

Conservation Genomics of the rare Californian endemic, Torrey Pine (*Pinus torreyana*)

A PhD position in conservation genomics is available to study the evolution and conservation of the rare Californian endemic, Torrey Pine with Jill Hamilton at North Dakota State University, Fargo, North Dakota in collaboration with Jessica Wright (USDA Forest Service, Research Geneticist, Pacific Southwest Research Station).

Torrey pine (*Pinus torreyana* Parry) is one of the rarest pine species in the world, restricted to two discrete populations, a mainland grove of approximately 3400 trees just north of San Diego and an island population of approximately 2000 trees approximately 280 km up the coast on Santa Rosa Island, one of the Channel Islands. This project will evaluate the genomic structure of natural populations and take advantage of a wealth of phenotypic data available from a common garden experiment of mainland, island and F1 individuals planted at the Santa Barbara Botanic Garden. The combination of a long-term common garden experiment coincident with large-scale genomic surveys in natural populations will provide a valuable resource to direct *in situ* and *ex situ* conservation guidelines for Torrey pine conservation. In addition, there will be plenty of room to pursue particular questions of interest depending on the interest and experience of the candidate. This interdisciplinary research will combine field work at both the common garden site and within the natural populations in California, collaboration with the Institute of Forest Genetics in Placerville, CA and lab work in the Hamilton Lab at North Dakota State University.

The ideal PhD student will be prepared to conduct field-based research as well as have some experience in molecular ecology/population genetics or bioinformatics for genomic data analyses.

For more information on the Hamilton Lab please visit the lab website at: <http://www.jillahamilton.com> and more information on the Department of Biological Sciences at NDSU at <https://www.ndsu.edu/biology/>. Fargo is the largest city in the northern Midwest and as 'Gateway to the West' is a vibrant, growing community that has access to numerous outdoor opportunities for all seasons.

Interested students are encouraged to contact Dr. Hamilton (jill.hamilton@ndsu.edu). Please include a brief description of your research interests and a CV in your email. Funding options are available for both US students as well as international students.

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