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# **NFGEL Open Project Status**

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#### ON-GOING NFGEL PROJECTS

PROJECT #	PARTNER	SPECIES	CONTACT	PROJECT TITLE	STATUS
232	BLM/FS-R1-4	Ponderosa Pine	R.Means; MF Mahalovich	Genetic testing of disjunct Ponderosa Pine stands on BLM lands in Wyoming and throughout the west	In reporting.
248	FS-R6	Golden Chinquapin	A. Bower	Genetic structure of Golden Chinquapin ( <i>Chrysolepis</i> <i>chrysophylla</i> )	716 samples. Isozymes extracted; 1/3 of samples run; marker dropped due to poor resolution. DNA isolated; 10 SSRs have been tested: 8 have been applied to current set of full samples. 10 additional SSRs are awaiting testing. A next-generation sequencing approach is being tested with partners from Oregon State University.
254	BLM	Ponderosa Pine	B. Means	Genetics relationships of isolated, disjunct ponderosa pine stands	In reporting.
258	FS-R6	Sisyrinchium sarmentosum	A. Bower	Hybridization and species identitity in <i>Sisyrinchium</i> sarmentosum	Ploidy complete; SSR marker development unsuccessful; DNA sent to Rich Cronn (USFS-PNWRS) for next-gen sequencing (cpDNA SNPs). Data is in analysis and reporting.
259	FS-R8	Longleaf Pine	B. Crane	Is there a genetic difference between the traditional coastal sources and the piedmont sources of longleaf pine?	Isozyme data complete. SSR data complete. SSR data sent to Craig Echt (USFS-SRS) for combination with SRS data and full analysis.

PROJECT #	PARTNER	SPECIES	CONTACT	PROJECT TITLE	STATUS
268	FS-R6	Oregon White Oak	A.Bower	Oregon white oak genetic diversity and geographic differentiation	Isozyme prepped and DNA extracted from samples that have arrived. Waiting for additional samples to arrive before lab analysis begins.
270	Oregon State Univ.	Douglas-fir, Western White Pine	G.Howe	SNP development in Douglas-fir and western white pine	DNA extracted and shipped to University of Arizona for SNP development. Report pending.
273	FS-R1-6/BLM	Ponderosa Pine	M.Mahalovich /R.Means	Genetics relationships of isolated, disjunct ponderosa pine stands	DNA extracted, isozymes prepped, needles counted. Awaiting any additional collections before analysis. These samples will fill in holes in the ponderosa database or be off site stands that need seed source identification.
277	Northwest Tree Improvement Cooperative (NWTIC)	Douglas-fir	K.Jayawickram a	Genetic Quality Control Study in Coastal Douglas-fir	To date, we have received samples over 750 clones (over 2,800 ramets). DNA has been extracted from clonal bulk collections and some individual ramet collections to verify mislabeling. SSR data has been collection on all samples at 6 loci. We also sent DNA from 282 samples to University of Arizona to test the utility of SNP data to address project objectives (data has been received and is being assessed). Further clonal samples are still expected to be received.
282	FS-R5	Vaccinium spp	J.Nelson	Genetic structure of Vaccinium (Huckleberry): a further comparison of Shasta Lake and Sierra Nevada populations.	Extension of Project 238. DNA extracted. SSR analysis complete. Results will be merged in analysis and reporting.
285	Private Company	Poplar		DNA fingerprinting elite populus clones	SSRs (12 loci) complete on samples received to date. Waiting for 10 additional samples to arrive.
286	FS-R9	Butternut	S.Rogers	Identifying butternut (Juglans cinerea), Japanese walnut, and their hybrids	DNA extracted. Laboratory analysis using 4 markers in underway. (CAPS and SCAR markers of ITS, other nuclear loci, and cpDNA loci are being used).
288	FS-R5	Ponderosa Pine	G.Lunak	Verification of controlled mass pollination (CMP) in two ponderosa pine seedlots	DNA has been extracted from 380 meg/embryo pairs. Samples are waiting for SSR analysis to be conducted.
290	FS-R8	Atlantic white cedar	B.Crane	Atlantic white cedar conservation and restoration	37 samples from four locations received. DNA extracted and isozymes prepared. Waiting for additional samples and proposal form.
292	UCDavis	Douglas-fir	D.Young	Fine-scale spatial genetic structure in Douglas-fir.	Received DNA samples. Samples waiting for analysis at 6 SSR loci.

## PROJECT IDEAS IN DEVELOPMENT

PARTNER	SPECIES	CONTACT	PROJECT TITLE	
FR-R1	Festuca species	M.F.Mahalovich	Species identification and cultivar detection in Festuca collections from Montana	
Center for Natural Lands Management	Spineflower	D.Rogers	Genetic studies of <i>Chorizanthe parryi</i> var. <i>fernandina</i> (San Fernando Valley Spineflower)	
FS-R6	Sidalcea	C.Emerson	Resolving taxonomic confusion around Sidalcea setosa and Sidalcea oregana ssp. spicata	
FS-R8	Table Mountain Pine	B.Crane	Table mountain pine conservation and restoration	
FS-R6	Lewisia columbiana	R.Helliwell	Taxonomy of <i>Lewisia columbiana</i>	
FS-R6	Packera	M.Darrach	A molecular genetic comparison of <i>Packera "novum"</i> and <i>Packera cana</i> in Washington State	
FS-all regions	Botrychium		Identification of Botrychium species	
NRCS Tanglehead S.Mitchell Is southern Texas Tanglehead more similar to local invasive Taustralian Tanglehead		Is southern Texas Tanglehead more similar to local invasive Tanglehead or to non-invasive Australian Tanglehead		
FS-R5	Sugar pine	J.Dunlap	Genetic diversity and structure of Southern California sugar pine	
UC Davis	Poplar	M.Zinkgraf	DNA extraction from poplar	
Green Diamond Resource Company	Erythronium spp.	B.Hayashi	Identifying Erythronium Species on Green Diamond Resource Company Property	
FS-R10	Vaccinium spp.	M. Stensvold	Examining genetic distinctiveness of <i>V. ovalifolium</i> ssp. <i>alaskaense</i> , and testing the putative hyborigin of "Beebleberry".	
FS-R10	Dune tansy	M. Stensvold	Examining the possible migrant source of a disjunct population of dune tansy ( <i>Tanacetum bipinnatum</i> subsp. <i>Huronense</i> ).	
Sierra Pacific Ind.	Lewisia spp.	J. O'Brien	Morphometric analysis of the <i>Lewisia kelloggii</i> group from California.	

## COMPLETED NFGEL PROJECTS (OCT 2013 – FEB 2014)

PROJECT #	PARTNER	SPECIES	CONTACT	PROJECT TITLE	STATUS
251	FS-R5	Fritillaria eastwoodiae	J. Nelson	Population genetics study of Fritillaria eastwoodiae	Original lab report submitted in FY12. One population added and a report addendum submitted late 2012. Additional sample collections received in 2013. Isozyme and ploidy analyses complete. DNA extracted and stored. Information has been reanalyzed and a second report addendum submitted February 2014.
279	Center for Natural Lands Management	San Diego Thornmint	D.Rogers	Population Genetics Study of Acanthomintha ilicifolia	Project Complete
281	Private Company	Slash Pine, Loblolly Pine		Ramet identification in slash and loblolly pine clones	Project Complete
289	FS-PSWRS	Poplar	M.Zinkgraf	DNA extraction of poplar samples	Project Complete
291	UC Davis	Douglas-fir	M.Crepeau	Confirmation of haploid nature of Douglas-fir megagametophyte samples	Project Complete