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**Abstracts of talks**

(\* Indicates speaker when abstract has multiple authors)

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**Conservation Genetics of Butte County Meadowfoam (*Limnanthes floccosa* Howell ssp. *californica* Arroyo), an Endangered Vernal Pool Endemic**

The endangered annual *Limnanthes floccosa* Howell ssp. *californica* Arroyo is restricted to vernal pools in Butte County, California. Our study confirms previous isozyme results and suggests that any loss of occurrences represents a significant deficit in the species' genetic diversity, making it extremely vulnerable to chance catastrophes. Recovery requires active restoration of existing populations and permanent habitat protection. Determining extant genetic diversity and structure are key in identifying populations with unique genetic resources to design reintroduction efforts, and guiding the design of seed collection scenarios for long-term *ex situ* seed storage. We surveyed 457 individuals from 21 distinct occurrences using nine polymorphic microsatellite markers. We confirmed earlier accounts of low within-population genetic diversity: average allelic diversity = 1.9 ( $\pm$  0.06 SE) alleles/locus; average Hobs = 0.10  $\pm$  0.018, average Hexp = 0.19  $\pm$  0.015, mean Shannon index 0.317  $\pm$  0.025, mean fixation index 0.556  $\pm$  0.044. The number of polymorphic loci ranged between 11-89%. Bayesian ordination determined 20 distinct populations. We confirmed high genetic structure among these ( $F_{st}$  = 0.65,  $P$  < 0.0001). We identified notable gene flow barriers across populations, confirming regional structuring between three previously defined population density centers and two outlying populations ( $F_{st}$  = 0.21,  $P$  < 0.0001). Population size estimates ranged between ~50 and > 5000 extant plants per site. All four Chico Airport occurrences had notably declined from 1992 population levels. We recommend close comparison of microhabitats of declining occurrences with genetically similar occurrences, to determine the potential for human-assisted gene flow via seed movement.