A fistful of *Astragalus*: phenotypic and genotypic characterization of the most taxon rich species in the North American Flora.

Ph.D. Defense of:

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OSU Botany and Plant Pathology
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Study of the infra-specific ranks (i.e., subspecies and variety) has been considered the study of the process of speciation. *Astragalus lentiginosus* Douglas ex Hooker (Fabaceae) is the most taxon rich species in the U.S. Flora, containing 40 taxonomic varieties. Three methodologies (morphometrics, CpSSRs, AFLPs) have been employed to test taxonomic hypotheses. Differing methodologies result in differing perspectives on processes, such as clinal evolution and incomplete lineage sorting, which may have given rise to observed diversity yet also provide the cohesiveness for which this group is considered a single species.