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Species Diversification in *Eriogonum umbellatum* var. *aureum*, *majus*, and *umbellatum* in the Colorado Rocky Mountains

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Eriogonum umbellatum (sulfur-flower buckwheat) is a diverse plant species with over 40 identified varieties found in the western United States and parts of Canada. In this project, three varieties of *Eriogonum umbellatum* (vars. *aureum*, *majus*, and *umbellatum*) with overlapping distributions are being genetically evaluated. To do so, the amplifications of highly polymorphic regions within the nuclear and chloroplast genomes are aligned, respectively, to determine if hybridization is occurring. This phenomenon occurs when genetically distinct individuals crossbreed and produce offspring expressing genetic qualities of both parents. Over time, these hybrids may be separated from the population and start to diversify, which can lead to the generation of a new variety within the species or even speciation itself. By studying hybridization patterns between the three selected varieties, we can start to understand the mechanisms by which species diversification may occur. Further understanding will also lead to new management strategies of uncommon species since individuals within newly diversified species and varieties are considered uncommon or rare.