

Review of Recovery Plan for Coastal Plants of the Northern San Francisco Peninsula: Raven's Manzanita (*Arctostaphylos montana* subsp. *ravenii*)

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Summary: The recovery plan appears to be an excellent first approach to the recovery of this species. I'm assuming most populations also would be found in the Presidio. While the species is considered a serpentine endemic by most, the plants will certainly grow well in other soils as long as the stands are within the maritime climate influence. Ensuring that soils used in cuttings, etc., are free of pathogens should be a priority. Producing stands isolated enough from other taxa that may harbor *Phytophthora* or other potential diseases should be a priority.

Consistency with older taxonomy doesn't seem appropriate by the way. It may be convenient at the moment, but specialists being trained now and in the future will not use that abandoned classification. I note that on p. 5, one of the points is investigation of the "Taxonomic Relationships" of the taxon. I encourage further studies, but note that one study already has focused on this group that was not mentioned. Utilizing sequence areas associated with the ribosomal regions, Markos et al. 1999 demonstrated that the Raven's manzanita (and Franciscan and Mt. Tamalpais manzanitas) fell onto a different phylogenetic branch than *A. hookeri*. Given that both the Raven's and Mt. Tamalpais manzanitas have double the number of chromosomes of *A. hookeri* and *A. franciscana*, the study does not rule out the potential for *A. hookeri* to be part of the lineage in the past, but no data support that at the moment.

(Markos, S. E., V. T. Parker, L. Hileman, and M. Vasey. 1999. Phylogeny of the *Arctostaphylos hookeri* complex (Ericaceae) based on nrDNA sequence data from the ITS region. *Madroño* 45: 187-199.)