

#2 *Pinus discolor* (*Quercus emoryi*) / (*Quercus toumeyi*) / Mixed Perennial Grass Woodland and Wooded Shrubland Association (P)

Border pinyon (Emory oak) / (Toumey oak) / Mixed Perennial Grass Woodland and Wooded Shrubland Association

This short-statured woodland community is characterized by a canopy (>2 m) dominated by border pinyon (*Pinus discolor*) with two common associates, Toumey oak (*Quercus toumeyi*) and Emory oak (*Quercus emoryi*). Border pinyon (*P. discolor*) is typically present as a short, stunted tree with heights ranging from 3 to 4 meters, but potentially under two meters where surface-rock cover is high. Overall, this species provides the majority of tree cover, contributing an average of 15% cover across the community, ranging from a low of 8% up to 21%. The two common associates vary greatly across the landscape, with areas where one might be absent or potentially co-dominant with border pinyon (*Pinus discolor*). Overall, Toumey oak (*Q. toumeyi*) provides a little more cover than Emory oak (*Q. emoryi*), with averages of 8% and 7%, respectively. In general, Toumey oak (*Q. toumeyi*) is most prevalent where the surface cover is dominated by rock, rarely providing more cover than border pinyon (*P. discolor*). The sparse field stratum is characterized by a low-cover (<10%) but diverse mix of perennial bunchgrasses. Bullgrass (*Muhlenbergia emersleyi*) and sideoats grama (*Bouteloua curtipendula*) are the most consistent species, followed by the more occasional Texas bluestem (*Schizachyrium cirratum*) and rare woolyspike balsam scale (*Elionurus barbiculmis*).

Common species

Pinus discolor
Quercus toumeyi
Quercus emoryi
Muhlenbergia emersleyi
Bouteloua curtipendula

Overall, this community covers 3.7% (72 ha, 172 ac) of the park, predominately on steep (30–50+%), generally south to east-facing mountain backslopes of 1,750–2,150 meters (5,741–7,053 ft). The surface cover is typically dominated by loose rock, gravel, and large outcrops of exposed bedrock. The primary examples of this community are on the large bedrock expanses that dot the slopes around Montezuma Peak and along Smugglers Ridge.

