

Flora and fauna

Stebbins is a blend of species characteristic of northern and southern communities. The Gulch's great depth provides a cooler microclimate and thus a niche for northern species. The well-drained Berea capstone anchoring the bluffs provides a narrow band for dry, more drought-adapted southern species.

Several plant communities dominate Stebbins: hemlock-northern hardwoods on the slopes and terrace bluffs, oak-maple along the highest Berea bluffs, beech-sugar maple in the older middle terraces and upland flats, and mixed mesophytic in the valley bottoms.

Moisture is abundant. Because Stebbins Run flows all year and is fed by many springs and seeps, the valley walls are carpeted with ferns and other species which demand lots of moisture.

As a result of abundant moisture and cooler air, many northern species occur here, such as Canada yew, mountain maple, witch hazel, and Canada fly-honeysuckle; winter wren, dark-eyed junco, mountain dusky salamander, and smokey shrew.

Because the cooler microclimate provides niches for many species of limited distribution, the Arboretum has designated Stebbins Gulch as a restricted natural area. Immediately south is the Arboretum's largest unfragmented deciduous forest, an area set aside exclusively for research.



Berea Sandstone sculpted by waterfall.

The depth, steepness, and massiveness of the Gulch prevented its being completely logged or grazed. As a result, the remnant of old-growth forest along Stebbins' northern bluff dates from pre-settlement times, and the walls and floors are carpeted with native species. Of the Arboretum's natural areas, Stebbins' flora and fauna are most representative of pre-settlement conditions.

Ferns are the most conspicuous and varied herbaceous plants. Common species such as silvery glade fern and fancy fern carpet the valley walls; rock-specific ferns such as walking fern and polypody fern grow on occasional boulders in the Gulch. Ferns needing lots of moisture such as bulblet fern occur in seepage areas in the shale formations; dry species such as hay-scented fern and bracken fern cover well-drained ridge tops.

In the valley bottoms, geological processes such as sediment deposition by high waters play an important role. The lowest terraces and gravel bands are constantly disturbed and provide a home for many annual flood-plain species such as clearweed, jewelweed, and enchanter's nightshade.

The evolution of geological events makes the Gulch a dynamic natural area to visit, and the many unique native species which inhabit Stebbins make it a conspicuously beautiful area. Rugged geology and abundant flora combine to make Stebbins Gulch one of the Arboretum's prizes.

*Text by Tom Yates and Brian Parsons
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To see Stebbins

The Stebbins Gulch is a restricted natural area, designated in 1968 by the U.S. Department of the Interior as a Natural History Landmark. Monthly hikes are led by an Arboretum guide. These hikes are rugged and allow individuals to experience the Gulch's scenic beauty and to explore its natural history. Stebbins Gulch was donated to the Arboretum in 1956 by S. Livingston Mather.

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