

Helena's rocks: The MEAGHER LIMESTONE



The Bluestone House is built mostly of stone quarried from a blue streak in the Meagher Limestone, a rock that really plays a bigger role in Helena's natural landscape than in the built one (if not usually so blue). Just take a look at our south hills and the top of Mount Helena.

Most of Helena's hills are steeper on their north sides than on their south sides. There's a short steep climb up the north side and then a gentle drop to the south -- if there's a drop at all. Often there's not -- only a bit of relatively level ground before the next climb -- and the terrain lifts southward in stair-step fashion, riser and tread.

That's because our hills are made mostly of rock stacked in layers like cards in a deck. The stack breaks off on the north and tilts south, so the edges of all those layers are exposed to erosion. The leading edges of the tougher layers make the risers, and the tops of those layers make the treads (see pages 8 and 14 in this series).

The Meagher Limestone is the toughest layer in the stack, so it makes the boldest riser and tread. It's the great cliff on the north side of Mount Helena (drawn below as seen from near the upper Prairie Trail to the west) and it's the saddle above it. It's Acropolis Hill and it's that nameless spur rising just south of Reeder's Village, west of Acropolis across what old-timers called the "canyon" of Last Chance Gulch. Its toughness is the reason why that little notch qualifies as a canyon at all.



Streams, flowing generally south to north, have cut across the up-tilted edges of all those rock layers in our stack -- the sharpness of the cut corresponding, more or less, to the toughness of the edge. Last Chance Gulch has had quite a time with the Meagher Limestone, managing to erode only a narrow and steep-sided notch. Compare it with the wide bowl eroded in the less-stubborn Wolsey Siltstone immediately downstream and one layer down in the stack.

The going might have been just a bit narrower when those old-timers called it a canyon. The blue streak quarried for building stone is accessible where the notch is narrowest, and enough appears to have been nibbled off the east end of that nameless spur to have opened the gap slightly (especially apparent as you approach from the south).

Among the nibblers was Emil Kluge, who seems to have owned the quarry for awhile. His wonderful old house (log cabin downstairs, brick-filled half-timbering upstairs) stands just upstream of the quarry, tucked between the road and a massive outcrop of un-nibbled Meagher rock.

Across the road from the quarry there's no room for anything even as skinny as Kluge's house, and the canyon-side probably looks just as it did when the old-timers first saw it, rugged and (now reassuringly) wild. The Meagher Limestone has given Helena a gift -- an abrupt and stubbornly fixed edge between the built landscape and the natural one.

You can begin to appreciate that gift as you approach the canyon from the north. Park Avenue, much wider than it has to be, dives like a highway straight on, as if fully expecting the

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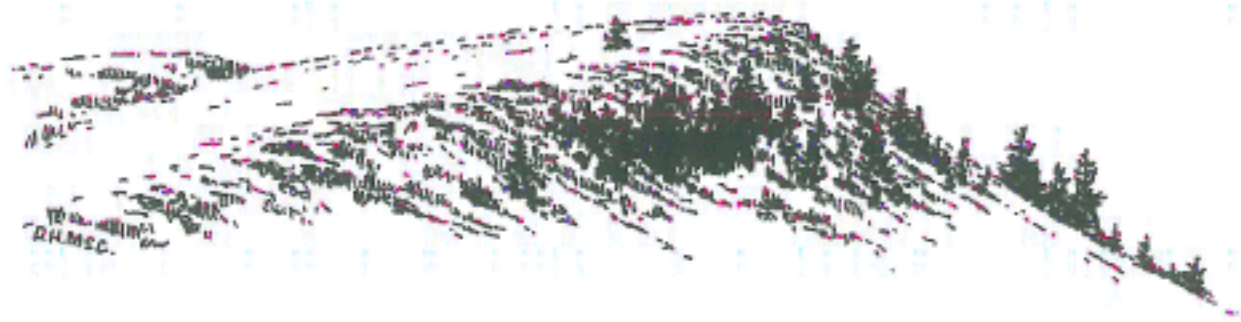


Meagher rock to part for it -- only to find at the last moment that it won't. Part of the pavement curls off against the spur to the right, back toward Reeder's Village, while the remainder quickly pinches down to a more sensible ten paces wide as it continues, chastened, southward.

The Last Chance canyon is the Meagher rock's lowest exposure in town. Its highest is the cliff and saddle on Mount Helena. West from that Mount Helena high point the leading edge first turns south to wrap around the backside of the mountain (part of the Backside Trail runs just above a miniature west-facing version of the great cliff) before turning more resolutely westward to eventually underlie much of the middle third of the Ridge Trail. East from the high point, the Meagher edge drops along the south edge of town, making variations of that same riser-tread landform all the way.

We've drawn two of those variations on this page. Above is the Mount Helena prototype, as seen from the northeast, and below is Acropolis Hill as seen from about the same direction. Most of our other Meagher bumps are more rounded, though they're all steeper on their north side than on the south. East from the Mount Helena high point first comes that spur sloping from the saddle down to the Adams Street trailhead, carrying the Powerline Trail all the way. Then the edge is offset southward (by an old fault running north-south next to the parking lot) to make the spur that Emil Kluge quarried. Next comes Acropolis Hill and then, across Dry Gulch, comes Quarry Hill. The quarry in Quarry Hill, probably the biggest hole ever dug in Helena, was not dug for building stone. Instead, in 1899, the Persell Limestone Company was said to have been shipping about a hundred tons a day to East Helena and Great Falls to be used in the smelting process. We're lucky they stopped when they did, or at that rate they might have taken the whole hill.

East of Quarry Hill, the Meagher rock plays with its theme just a bit more before running along the foot of Bompert's Hill and off toward Montana City, leaving the local skyline to younger rocks. The great wooded riser of Mount Ascension is another limestone, at least a hundred million years younger and six layers up in the stack.



The Sesquicentennial Project

2014 will be Helena's sesquicentennial year, its 150th year. How'll we mark it? The best way, we think, is to celebrate what's authentically peculiar to our town -- to sharpen our sense of place.

We won't define "sense of place", beyond saying that it acts much like a sense of humor. Either you "get" a place or you don't. If you get it, it's engaging and invigorating and good for the imagination. You'll want to savor it.

We get Helena, so, from now to the sesquicentennial, we'll publish these free bits of information, one page at a time, about Helena's architecture, landscape, weather, history, whatever tickles our sense of place.

Look for these pages. Pick them up. We can't say how many there'll be, but we'll number them. Keep them and you'll build a trove of well-mulled Helena lore.