

# Kolob Arch

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In Utah, one natural bridge, more or less, makes little difference. The state already has within its boundaries most of the known bridges and arches of any consequence in the United States. Nonetheless, when one of unusual size comes to light it is at least a matter of interest. Such a span, and one which has received scarcely any publicity, stands in the southern part of the state in Zion National Monument, adjacent to much better known Zion National Park.

I walked in to see the bridge in 1951 and then tried to reach it by various routes, but soon found that the climbing was beyond what could reasonably be expected of a solo attempt. The top surface of the bridge is adjacent to and continuous at both ends with an extensive hanging shelf. This shelf, around its entire periphery, is isolated either above or below, by towering sandstone cliffs. If one can reach the hanging shelf from any direction at all, the problem is solved.

In August of 1953, A.E. Creswell and I were in Zion National Park and after inquiry at Park headquarters, found that the bridge was still unclimbed, so far as was known. A few weeks previously, two Philadelphia climbers, Victor R. Fritz and George H. Riley, had made the attempt, working out the major part of what is apparently the only feasible route. They turned back a little short of the objective because of the late hour.

On August 10, after consultation with the staff at Zion Park Headquarters, who made helpful suggestions regarding the approach route, Creswell and I decided to attempt the climb. We drove up the high level road which goes northward from the town of Virgin towards Cedar City and after about thirteen miles turned off to the left, following a private road for an additional one and a half miles. The car was left at the end of this road, 1.2 miles northwest of Firepit Knoll\* in the late afternoon.

After some exploring, we located a very helpful cattle trail which begins near the end of the road. Following this trail, we walked through a low pass and continued gradually down into delightful Hop Valley where a shallow stream meanders over a flat, sandy floor between high sandstone walls. About three miles below the pass, the trail leaves the streambed in an inconspicuous fashion and gradually ascends a tree-covered slope on the left. This detour appears wholly illogical until one continues around the bend and finds that the canyon floor descends into a frightful chaos of great boulders and little cliffs. The visitor is well advised to desist then and there and return to the wooded slope.

\*Map: ZION NATIONAL MONUMENT, NORTHERN PART. Geological Survey, U.S. Department of the Interior. (Firepit Knoll is at the lower edge of the sheet.)

Unfortunately, the proper route up the wooded slope is by no means obvious to one arriving in the area for the first time. The cattle have shown considerable independence in developing devious side trails which lead to no objectives whatever. However, trail or no trail, if one forges steadily ahead, well above and to the left of the streambed, he will eventually arrive at the crest of a ridge, though probably a little short-tempered after tusseling with dense brush scrub oak for half a mile. Such was the case with Creswell and me in spite of the fact I had been over this ground two years before.

From the crest of the ridge, we descended 400 feet to La Verkin Creek, which we followed downward for one or two hundred yards to the tributary stream draining southward from the canyon in which the bridge is located. It was now nearly dark. We made camp on the tributary stream near the junction.

All of the following day and the morning of the next, we spent in exploring and trying various approaches, each of which eventually defeated us. Finally, about noon on the second day, we pushed up a gully which we had previously rejected because of its wild appearance, and began to make real progress. Presumably this was the route used by Fritz and Riley. We found one piton and three or four expansion bolt holes further up.

The gully is reached by proceeding north from La Verkin Creek up the tributary stream previously mentioned until the latter branches, nearly at the same spot, into three brooks. It is near here that the bridge first comes into view, suspended against a cliff 700 feet above.

From the triple junction, we turned up the ridge lying between the left (facing upstream) and the middle brooks. After avoiding some initial cliffs by moving to the right, we zig-zagged up the ridge on its eastern side among trees, over steep slabs and through low cliffs. Up ahead a pillar rose against the sky in a V-shaped notch between two massive sandstone walls. The gully, which is the key to the ascent, lies between the pillar and the western wall. (On the map, this gully is shown lying immediately west of the middle brook)

Where the gully emerges onto the slabs, it is in reality a small chasm and looks quite forbidding. Fortunately, about 150 feet below the base of the western wall, three trees have fallen across the gap in a tangle, providing access to a brushy, sandy ledge on the far side 25 feet away. After crossing over on the topmost tree trunk, which is some 16 inches in diameter, we scrambled left up the steep sandy ledge, clinging to tree roots in the loose sand to keep ourselves from sliding off altogether. After 40 feet, we attained the bottom of the gully where it leveled off somewhat just above the deep section spanned by the fallen trees.

From here, we continued up the narrow, brushy passage until we reached a steeply rising cleft, wet, mossy and dimly lit inside. High overhead, a great angular chockstone jutted out overriding everything. We queasily started up the cleft but were surprised to find good holds on the left wall, though they were a little slippery in spots. After 150 feet, our heads bumped into the chockstone and we stopped. We were in a veritable cave.

We faced about and, now looking outward, saw on our right a foot-wide slot between subsidiary chockstones. Turning speleologists for the moment, we squirmed through the opening, pushing our packs and ropes ahead of us. After crawling on all fours through a short tunnel, we emerged onto a ledge some distance out from the back of the cleft. The great chockstone still soared out above us.

The route was becoming a little airy. After roping up, Creswell stepped up three feet onto a rudimentary ledge and moved outward along the wall. We noticed that our predecessors had used expansion bolts here, but we were able to avoid them by driving angle pitons into an overhead crack. With these as security, Creswell advanced far enough along the wall to haul himself up past the chockstone.

Once past this obstacle, we climbed quickly through brush and boulders for several hundred feet to a point where the gully divided into two branches. The east branch was larger and was filled with trees and brush; the west was shorter, steeper and mostly bare sandstone. We chose the ridge between the two branches, relying mostly on friction and four reasonably solid pitons for the first 120 feet. Initially the slope was about 50 degrees, but it gradually eased off and the ridge merged into the surface of the hanging shelf at a point about four-tenths of a mile north/northeast of the bridge.

We were up! We quickly walked over a gentle swell in the shelf, down into a shallow valley and up again to our objective.

The bridge is big. Only from the shelf behind it can one get the full impression of its massive sweep. From all other directions the effect is diminished by the adjacent cliff. Perhaps some observers would object to calling it a bridge at all, since it does not stand boldly free in the manner of Rainbow, Owachomo, or Sipapu bridges, for example. Creswell and I accepted it as it is -- a big arch with a lot of air around it!

The Park Service wanted to know the approximate dimensions of the bridge and so did we, but there was no time to make measurements now. Our excessively long preliminary explorations had used up too much time, and all our food as well. We hurried back down to our camp near La Verkin Creek, packed up and continued on out, arriving at Park Headquarters at 9:30 that evening.

In order to make the measurements, we returned two days later, on August 14 and started in from the car at 4:55 a.m. Now well familiar with the route, we arrived on top of the bridge at 10:45 and set to work at once. From a point on the front, top surface, approximately over the center of the arch, we lowered a two pound fragment of sandstone attached to a long stout cord until contact was made far below. The process was repeated at the back of the bridge. The cord lengths gave figures which might be interpreted as heights. Actually, the term "height" does not have much significance in the case of this bridge. A rock dropped from either the front or the back lip would, after falling a considerable distance, strike the face of a cliff and bound on down another two or three hundred feet.

Again working near the center, one of us lowered a weight down the back wall of the arch while the other observed from the shelf and reported when the weight reached open air. This gave the vertical thickness at the center. The under-surface of the span is sharply beveled from front to back.

The two extremities of the long slot between the arch and the hanging shelf were inaccessible, but the distance between them was determined by taking parallel compass bearings on each and then measuring, along the top surface of the bridge, the distance between the two sightings. The top surface of the bridge slopes downward from south to north at an average angle of about 20 degrees. This was taken into account in calculating the horizontal length of the opening, the latter being a little less than the distance between our sightings as measured. The final figure may be called the "span" of the arch.

The transverse distance across the top surface of the bridge varies somewhat. We made a measurement over the center of the arch. The distance from the shelf out to the back face of the arch was estimated by use of the rangefinder on one of the cameras, a very approximate measurement, of course.

These measurements, which required no small amount of climbing, some of it roped, kept us busy until 2:30 at which time we started down, spurred considerably by a rapidly approaching thunderstorm. This time, we descended to the gully by way of the west wall of its west branch, opposite the base of the dividing ridge. As a matter of fact, this probably would be an easier route of ascent than the one we used on the nose of the ridge dividing the two branches. The car was regained at 6:30 p.m.

Our measurements, which are belived to be on the conservative side, are tabulated below:

Height to top surface, measured in front -	330 feet
Height to top surface, measured at back -	240 feet
Vertical thickness, measured at back -	80 feet
Transverse width at center -	65 feet
Distance out from shelf -	50 feet
"Span"	about 290 - 310 feet

For comparison, the lengths of a few other large spans, all in Utah, are listed below:

<u>NAME</u>	<u>LOCATION</u>	<u>SPAN, IN FEET</u>
Landscape	Arches National Monument	291
Rainbow	Rainbow Bridge National Monument	287
Sipapu	Natural Bridges National Monument	261
Kachina	Natural Bridges National Monument	206
Owachomo	Natural Bridges National Monument	200
Double Arches (larger)	Arches National Monument	163
Broad Arch	Capitol Reef National Monument	133
South Window	Arches National Monument	130
North Window	Arches National Monument	98