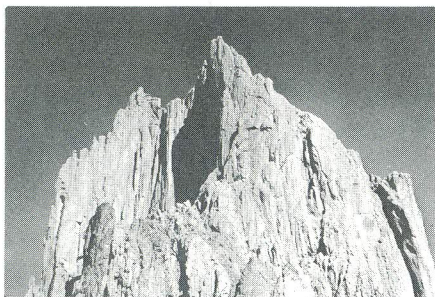


*Shiprock from the southeast showing the Southwest Butte and the South Wall on the left and the Honeycomb Gully on the right.*



*Below: The unclimbed Southwest Butte directly below the south summit. The West Wall, the Horn, and the north summit in the background.*

# SHIPROCK:

This article is written partly in response to Steve Roper's recent actions<sup>(1)</sup> and partly to try and stem some of the rumors, half-truths, and conflicting statements about one of America's most unique climbs. I hear that Shiprock is easy, for it has been made in a couple of hours. I hear it is difficult, for parties have found disaster, death, and have abandoned quantities of equipment on it. I now hear it is "virtually impossible"<sup>(2)</sup> due to the bolt chopping, yet the entire climb has been made fifth class.

## Brief History

The first serious attempt on Shiprock was by Orms and Hause in 1938. This was unsuccessful and the party turned back after Orms fell on Orms Rib. The next year the climb was successfully made by Bedayn, Robinson, Dyer, and Brower of the Sierra Club and was the first successful use of expansion bolts in sixth class climbing. Their route was so ingenious that it was ten years and a number of attempts before it was climbed again.

Since 1959 the climb has been made fairly frequently, too often by people inadequately prepared for the physical conditions of the climb.

## The Nature of the Rock

Shiprock is the plugged vent of a forty- or fifty-million-year-old volcano. Erosion has removed several thousand feet of land since the volcano was

active, so if you wish to visualize the formation of Shiprock you must imagine a moderate sized volcano erupting on a land surface that was higher, although not much higher, than the present summit of Shiprock. The lava came up from a mile or more beneath this surface and ripped up chunks of the rocks it passed through, carrying them along with it. When the volcano became inactive the molten rock in the vent solidified to form a fine-grained yellowish rock. Although it's geologically inaccurate, we climbers can call this rock "rhyolite." The ripped-up chunks of foreign rocks were caught in the solidifying rhyolite and are called "xenoliths," examples of which are the granite boulder in the Bowl and the large block of fossiliferous limestone at the base of Shiprock.

Final eruptions of a darker magma cut the solidified rhyolite and cooled to form the dikes of basalt. Erosion has now stripped away the surrounding sandstones and sculptured the rock to form a magnificent monolith standing nearly 2,000 feet above the sandy desert.

Rhyolite is just a quickly cooled and fine-grained equivalent of granite and since it is formed of minute, interlocking crystals, it should be a hard, tough rock. It is hard and tough where it has not been weathered but, unfortunately, the rhyolite of Shiprock is very susceptible to the chemical attack of water<sup>(3)</sup>. The outer several inches of the rock

<sup>(3)</sup> Most common minerals, with the exception of quartz, have an affinity for water which causes the crystals to expand, decompose, and turn to clay.

(1) Summit, v. 10, n. 5, p. 24-26

(2) Summit, V. 10, n. 5, p. 30

