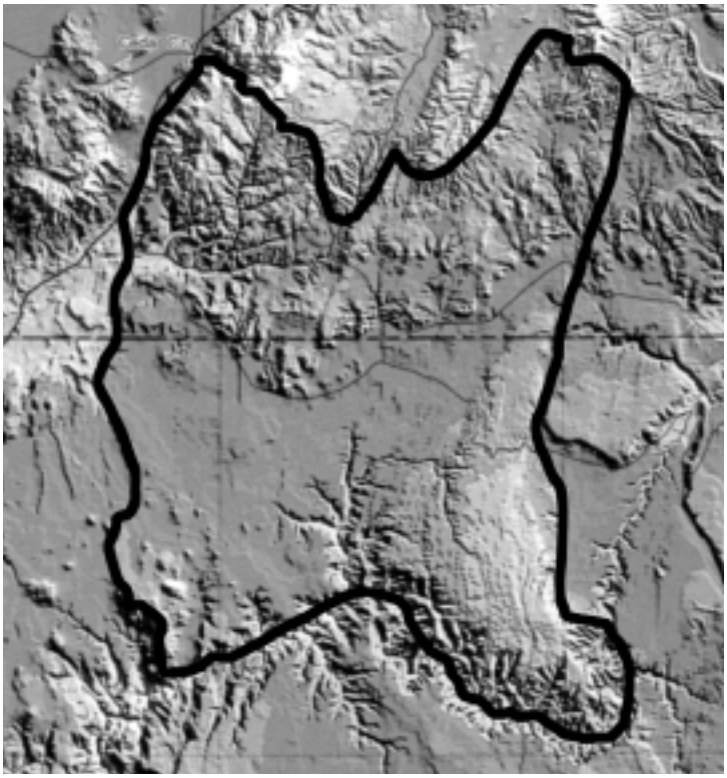
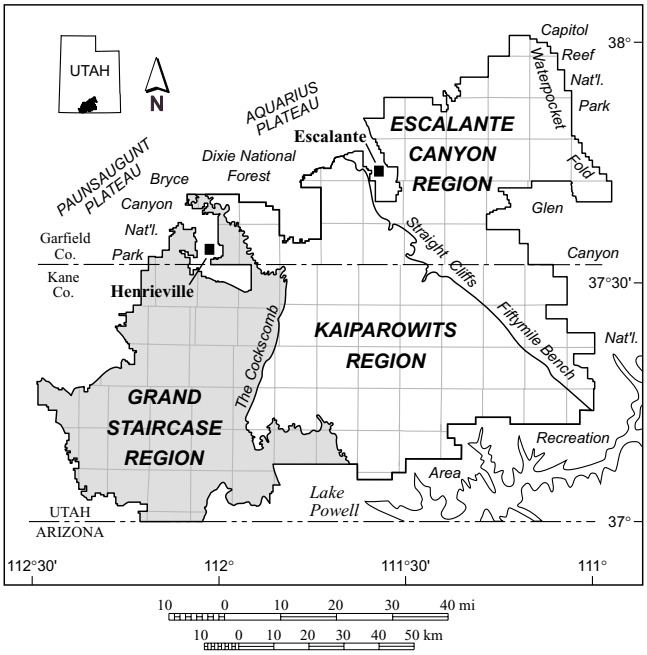
What is the Grand Staircase?

This staircase is like no other. More than six thousand vertical feet of alternating cliffs, slopes, and terraces make up this giant staircase, which extends horizontally about 150 miles from the north rim of the Grand Canyon in northern Arizona to the top of the Paunsaugunt Plateau in southern Utah. The eastern margin of the Grand Staircase is marked by the East Kaibab monocline, commonly known as The Cockscomb, and the western margin is generally considered to be the Hurricane Cliffs. Each "riser" is a cliff or slope as much as 2,000 feet high and each "tread" is a plateau, terrace, or flat that is as much as 15 miles wide. The origin of the name "Grand Staircase" is uncertain, although early explorers like Clarence Dutton described this area as being "like a great stairway" in the 1880s.



A generalized outline of the Grand Staircase.

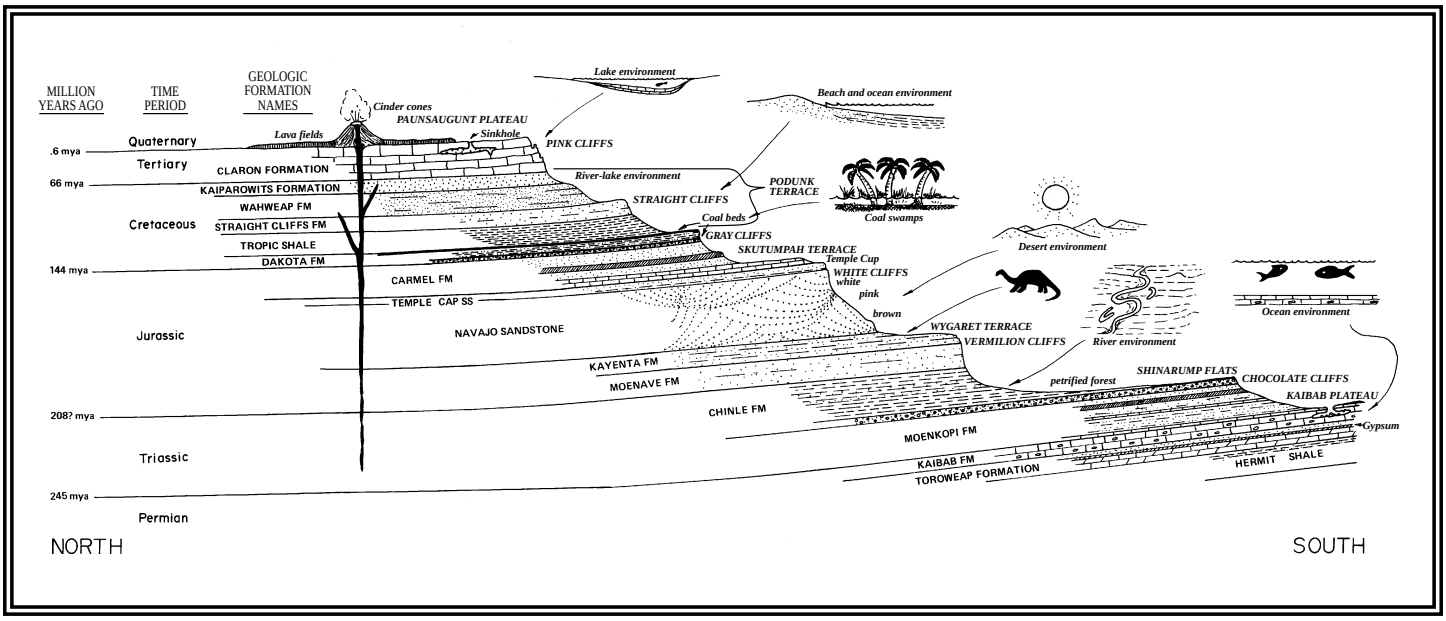


The northeastern part of the Grand Staircase is one of the three regions within the Grand Staircase-Escalante National Monument in southern Utah.

A classic portion of the staircase is within the western part of the Grand Staircase-Escalante National Monument in southern Utah. The alternating configuration of cliffs, terraces, and slopes is due to the varied erosion rates of different rock types. Harder rocks, such as sandstone and limestone, erode slowly and make up the cliffs and terraces. Softer rocks, such as shale and siltstone, erode faster and make up the slopes.

Good viewing spots of the entire staircase are hard to come by. One of the best is south of Kanab, Utah along Route 89A in Arizona. Otherwise, portions of the treads and terraces are visible east and north of Kanab.

Climbing the Grand Staircase



A profile of a portion of the Grand Staircase in southern Utah and northern Arizona

Kaibab Plateau: the southern and lowermost tread forms the north rim of the Grand Canyon in Arizona and extends northward into Utah. Kaibab Formation limestones.

Chocolate Cliffs: the first major riser is made of chocolate brown-colored siltstones and sandstones of the Moenkopi Formation. Forms a slope below the more resistant cap of light gray conglomerates and sandstones of the Shinarump Member of the Chinle Formation.

Shinarump Flats: upper portion of the Shinarump Member. Above the flats are slopes of bright red, pink, brown, purple, white, yellow, and gray-green mudstones and sandstones of the Chinle Formation.

Vermilion Cliffs: red to reddish-orange sandstones of the Moenave and Kayenta Formations.

Wygaret Terrace: a narrow tread dotted with sandstone buttes and monuments. Upper Kayenta Formation.

White Cliffs: white, pink, and brown Navajo Sandstone. Cliffs are capped by the Temple Cap Sandstone - a cliff- and terrace-forming unit of white to grayish-pink sandstone.

Skutumpah Terrace: Carmel Formation limestones. Slopes above the terrace are red to brown siltstones and sandstones and white gypsum of the Carmel Formation.

Gray Cliffs: gray to nearly black mudstone, coal, shale, and sandstone of the Dakota Formation.

Podunk Terrace: slopes and cliffs of sandstones, siltstones, and shales of the Tropic Shale and Straight Cliffs, Wahweap, and Kaiparowits Formations. The Straight Cliffs riser is tan to buff sandstone and mudstone.

Pink Cliffs: uppermost riser, pink- and red-colored Claron Formation limestones. Classic viewpoint in Bryce Canyon National Park.

Paunsaugunt Plateau: uppermost tread of the staircase. Plateau is sporadically covered with basalts and sediments.

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