

summits are uncovered by snow, they are believed to be composed of secondary strata.

Many of the mountains in the extensive range of the Andes in South America, also rise much higher than Mont Blanc; but, granite has not been found there in a greater elevation than eleven thousand five hundred feet, an elevation exceeded by many of the granite mountains in Europe. The range of the Andes is the seat of active volcanic fires, which appear to have covered the primary mountains with an immense mass of matter, ejected by ancient and recent eruptions. In Mexico and New Spain also, the granite appears to be nearly covered by basalt, porphyry and lava, ejected from the numerous volcanoes which now exist, or have existed in those countries.

To this accumulation of volcanic matter, the mountains in South America, owe their superior elevation. Chimborasso and Cayambo, are nearly the highest mountains in the Andes,—the former rises twenty one thousand four hundred and forty feet,—but their summits are vast cones, composed of volcanic productions covered with snow. Chimborasso is one mile and one hundred and sixty yards higher than Mont Blanc. The general arrangement of the Andes consists according to Humboldt, of granite, gneiss, mica and clay slate, as in the Alps; but, on these, are frequently laid porphyry, and basalt, “arranged in the form of regular and immense columns, which strike the eye of the traveller like the ruins of enormous castles lifted into the sky.”

In the eastern parts of the United States, and in Canada, granite is seen, near the surface, uncovered by other rocks, and does not rise to any great elevation. The constant occurrence of granite, at a lower level in America than in Europe, is a remarkable geological fact. In Europe, the central part of the principal mountain ranges are granite; as in Scandavia, the Alps, the Pyrenees, and the Carpathian mountains. In Asia, granite forms a considerable part of the Uralian and Altaic range of mountains, and it appears to compose the principal mountains that have been examined in Africa.

The parts of England and Wales where granite and granitic rocks occur, are Cornwall, Devonshire, North Wales, Anglesea, the Malvern Hills in Worcestershire, Charnwood Forest in Leicestershire, and in Cumberland and Westmoreland. Granite rises near the bottom of Skiddaw in Cumberland. The granite near Shap in Westmoreland is porphyritic, containing large crystals of red felspar. There are rolled masses of granite on the banks of Ulswater, resembling the granite of some parts of Cornwall and of the Wicklow Mountains in Ireland, but more highly crystalline than the latter. The felspar is in large white and reddish-white crystals. The mica is a blackish green, and on the outer parts, decomposed. I am inclined to believe, that the same formation of granite, which just makes its appearance on the western side of England and Wales, is continued under the Irish Channel; or, if broken there that it rises