

In speaking of mountains, we have frequently employed the word *chain*. What are we to understand by this term? A *chain* is a series of mountains, extending principally in a longitudinal direction. When the transversal dimensions of such a system become as considerable as those of its length, we define it as a *mass*; as, for example, the Harz, the Scotch Highlands, and the Ardennes.

One noteworthy fact is this: that in proportion to the loftiness of a mountain-system will be the broken character of its summits, the depth of its valleys and ravines, the steepness of its precipices, and the rapidity of its slopes.

The flanks of a mountain-chain are termed its faces, or *versants*, because they are regarded as the starting-point of the waters which diverge or descend into the valleys and plains.

The two flanks, or slopes, often present the most remarkable differences; while one may sink with a gentle and gradual inclination, the other will be rudely scarped, rough, and precipitous. For example: the Alps descend much more rapidly on the Italian side than on that of France or Switzerland. Mount Lebanon offers a very gentle declivity towards the Euphrates, but opposes a steep cliff towards the Medi-

actual height of the backbone or ridge of the mountains. From Humboldt ("Kosmos," v.) we borrow the following data referring to the principal chains of the globe, adding the elevation of their base above the level of the sea:—

HIMALAYA.		ALPS.	
	Feet.		Feet.
Kinchinjanga,	27,000	Mont Blanc,	15,000
[Colonel Waugh,	28,178]	[Piedmontese Survey,	15,739]
Ridge,	15,500	Ridge,	7,000
Base (at Delhi),	975	Base,	1,300
CORDILLERAS, OR ANDES.		PYRENEES.	
	Feet.		Feet.
Aconcagua,	23,700	Mont Maladetta,	11,300
[Admiral Beechey,	23,910]	[Annuaire du Bureau des Longitudes,	10,886]
Ridge,	11,700	Ridge,	7,920
Base (sea-level),	100 to 300	Base (sea-level),	2,200

Thus, in the Alps—and also in the Caucasus—the height of the entire mass is double the mean elevation of the passes; in the Cordilleras of Quito and the Himalaya Mountains, the ratio is that of 9 to 5; in the Pyrenees, that of 3 to 2. The Pyrenees are the least accessible rampart in Europe; the Alps, on the contrary, while offering the deepest depressions, are much easier to traverse.

The preceding figures are those laid down by Humboldt in 1825. According to recent measurements, some modifications should be made, but they will suffice to give an idea of the comparative height of the principal chains.

Subjoined are more exact valuations of the same heights. The brothers Schlagintweit have given the following comparisons for the Himalayan, the Karakorum, and the Alpine ranges.

HIMALAYA.		KARAKORUM.		ALPS.	
	Feet.		Feet.		Feet.
Height of Guarisanakar, ..	23,730	Height of Dispang,	28,000	Height of Summit (average),	15,630
Passes of Do.,	17,640	Passes of Do.,	18,525	Do. of Passes (average), ..	7,475

We owe to Berghaus the following estimate of

THE ANDES.	
	Feet.
Chimborazo (summit),	20,020
[Humboldt,	21,424]
Western Passes,	14,305
Eastern Passes,	13,300
Average Elevation,	13,927