

THE STELVIO PASS ROAD

The Stelvio Pass road, which connects Bormio to South Tyrol and Switzerland, is a mountain road famous throughout the world for its panorama, curves and for having often represented the greatest difficulty in the mountainous sections of the "Giro d'Italia", the most important cycling competition in Italy.

The route is spectacular, including 40 hairpin bends on the Lombard side above Bormio, and another 48 on the South Tyrolean side above Prato allo Stelvio, in Venosta Valley. Ascending from Bormio, you can reach the Umbrail Pass (2503 meters) which allows entry into Switzerland and the descent to Santa Maria in the Monastero Valley. At the summit, the legendary Stelvio Pass (2758 meters) is the highest automotive pass in Italy and the second highest in Europe.

The total route, from Bormio to the Stelvio Pass, and descending the other side to Prato allo Stelvio is 47 km long.

Cycling along the Stelvio road, conquering the strenuous climb and enjoying the satisfying descent, is the dream of many cyclists, a dream that in recent years is easier to realize on days when the Pass is closed to traffic on both sides - at least 2 dates per year in the summer period. This closure to vehicular traffic allows cyclists to avoid meeting cars or motorcycles on the way and to enjoy this exceptional route in complete safety.

The Stelvio road runs sideways through the wonderful Braulio Valley, a wild valley marked by deep gorges and waterfalls that the Braulio stream has engraved over time.

The Stelvio road has been known for a very long time: in the Middle Ages it was a risky mountain path and few people attempted to climb it! At the beginning of the Nineteenth Century, the Emperor Francis I of Austria wanted a new road that would connect the Venosta Valley to the Valtellina, and from there to Milan, then Austrian territory.

The project was entrusted to Carlo Donegani (1775-1845), an expert on high mountain engineering. The work began in 1822 with the employment of more than 2,500 workers, engineers, and geologists, and after just three years, in 1825, the new road was inaugurated in the presence of the emperor himself.

Until 1915 the Stelvio Pass Road was used throughout the year by travelers and merchants, thanks to the efficient work of men employed to shovel snow during the winter. During World War One, it was a theater of clashes between the Italians and the Austrians, and after the armistice of November 4, 1918, both sides became Italian, and the Pass lost its original significance in connecting Vienna to Milan. At that time, it was decided to close the Stelvio Pass in winter and even today it is passable from the end of May to early November.

Once we will reach the Pass, we will not only have a panoramic view of the Lombard and South Tyrolean sides, but we could also see many glaciers that have been used for over 80 years for summer skiing.

Finally, the deepest drilling in Europe for the study of permafrost was conducted at the Stelvio Pass! In 2010, the University of Insubria as part of the SHARE STELVIO regional project conducted a 200 m deep rock drilling. In the borehole, with a diameter of a few cm, thermometers were lowered, and they continuously recorded the temperature of the rock from the surface to the bottom. After 2 years, the researchers analyzed the collected data and discovered with surprise that at 200 m deep in the rock the temperature had remained below zero, always, for two consecutive years, without ever rising even in summer!

Staying permanently below zero for two years is exactly what the PERMAFROST definition requires! In fact, the term permafrost refers to rock or ground, frozen for at least 2 consecutive years. In general, permafrost is characterized by a surface layer, which melts in summer, and by a deep layer that is permanently frozen. The ice core hidden by rock, debris or soil can be massive or interstitial and the layer affected by the permafrost can vary from a few tens of meters to over 100 meters

thick, as is known for areas of the great North such as Alaska or Canada! Before this drilling at the Stelvio Pass, no one imagined that the Permafrost could extend so deep in our Alps!
The Stelvio Pass is therefore a place of records, both sporting for those who try their hand at climbing by bicycle, and scientific as in the case of permafrost!