

VJETRENICE

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In the same climatic type, canyon and cliff valleys show some significant deviations of certain climatic parameters, especially air temperatures and humidity relative to the same values at the same time of measurement on open surfaces. These changes in a very small area are salient in the warmer period of the year, especially during summertime, when the thermal differences measured in the said river valleys in relation to the open valleys and the temperature, difference in temperatures can be up to 10°C, while the air humidity is around 40 %.

Daily thermal and hygrometric oscillations increase if the river valley is rather deep and narrow and oriented south-north and covered with dense forest vegetation. They are less warm during the day compared to surrounding open areas, resulting in lower temperatures, higher air humidity and slightly higher air pressure. In such circumstances there will be different baric state within these valleys compared to the surrounding open terrains, primarily as a result of uneven heating. The more compacted isobars of higher air pressure in the cooler closed canyon-cliff valleys will direct the isobaric system towards the thinner isobars of the warmer air at the end of these valleys. In this way, the advection of cold (fresher) air will be established, towards the warmer environment where the canyon or cliff valley are ending.

Advection of the air conditioned by unequal baric conditions is actually a vapor wind that constantly blows from a cooler river valley to its end. This aeration places them within special valley type that carries refreshment and is called vjetrenice.

Key words: narrow river valleys, cliff-canyon river valleys, thermal differences, air humidity, isobaric states, advection, vjetrenice.