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## THE MONTI BERICI: GUIDE OF THE FIELDTRIP

**ABSTRACT:** SAURO U., *The Monti Berici: Guide of the fieldtrip*. (IT ISSN 1724-4757, 2005).

The Monti Berici plateau is the most southern karst morpho-unit of the Southern Alps and represents a peculiar type of karst. The analysis of its topography, the identification of a «morphostratigraphy» based on the relicts of planation surfaces and on the different types of fluvial forms, the recognition of the few elements of chronological significance present in this context, allow for the delineation of a preliminary model of the geomorphological evolution of this mountain group. The main geomorphological types are of fluvial origin and have been influenced not only by the climatic changes, but also by the tectonic uplifting and/or by changes of the base level. The karst landforms have mostly evolved on the relict fluvial forms or in the context of relatively inactive fluvial forms. The age of the main forms extends over a very long time span, probably in the order of 15 millions years. The preservation of very old forms can be explained by the peculiar geomorphological environment, which was not affected by glacial erosion during the Pleistocene. The comparison between the evolution models of several karst morpho-units in the Southern Alps helps to understand the differences in their geomorphological styles.

**KEY WORDS:** Morphostratigraphy, Relict fluvial forms, Karst morphogenesis, Venetian Prealps.

**RIASSUNTO:** SAURO U., *I Monti Berici: guida all'escursione* (IT ISSN 1724-4757, 2005).

L'altopiano dei Berici è l'unità morfocarsica più meridionale di tutte le Prealpi e rappresenta un particolare tipo di «carso». L'analisi della sua topografia, l'identificazione di una «morfostratigrafia» basata sui relitti di superfici di spianamento e su diversi tipi di forme fluviali, il riconoscimento dei pochi elementi di significato cronologico presenti nel contesto del rilievo, permettono di delineare un modello preliminare dell'evoluzione di questo gruppo montuoso. I principali tipi geomorfologici sono di origine fluviale e sono stati influenzati non soltanto dai cambiamenti climatici, ma anche dal sollevamento tettonico e/o dai cambiamenti del livello di base. Le forme carsiche si sono per lo più evolute nell'ambito di relitti di forme fluviali o nel contesto di forme fluviali relativamente

inattive. L'età delle forme principali comprende un ampio intervallo di tempo, probabilmente dell'ordine di 15 milioni di anni. La conservazione di forme molto vecchie può essere spiegata con il particolare ambiente geomorfologico, che non è stato interessato dall'erosione glaciale durante il Pleistocene. Il confronto tra unità morfocarsiche diverse delle Prealpi aiuta a comprendere analogie e differenze nella loro evoluzione e nei loro stili geomorfologici.

**TERMINI CHIAVE:** Morfostratigrafia, Forme fluviali relitte, Morfogenesi carsica, Prealpi Venete.

### TYPES OF KARST IN THE SOUTHERN ALPS

The Southern Alps consist of a large number of very different karst morpho-units, each characterized by a complex history, difficult to be reconstructed in detail. While it is relatively easy to describe their forms and to define their main geomorphological styles, i.e.: tectokarstic, fluvio-karstic, glaciokarstic, typically karstic (mainly characterized by dolines), it is difficult to recognize the morphogenetic events preceding the last ones and, in general, to delineate the morphological evolution during the Neogene and the Quaternary.

One of the main problems is that many of the morpho-units consist mostly of erosional landforms only partially covered by scattered deposits, relatively recent in age; older deposits, lower Pleistocene and Pliocene in age, are nearly completely missing or difficult to be identified.

The best strategy to understand the evolution of the Southern Alps is, as a first step, to focus the research on the most recent morpho-units, made of relatively young rock formations. Here, the average thickness of marine rocks worn away after the emersion is not so big and the erosional forms are relatively recent. According to the modest elevation of these young morpho-units, part of their erosional surfaces are gentle sloping and are sometimes partially covered by relatively old sediments deposited after the emersion. These characters make it easier to recognize the interrelations between the different erosional forms and the types and ages of the deposits located on the same forms.

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