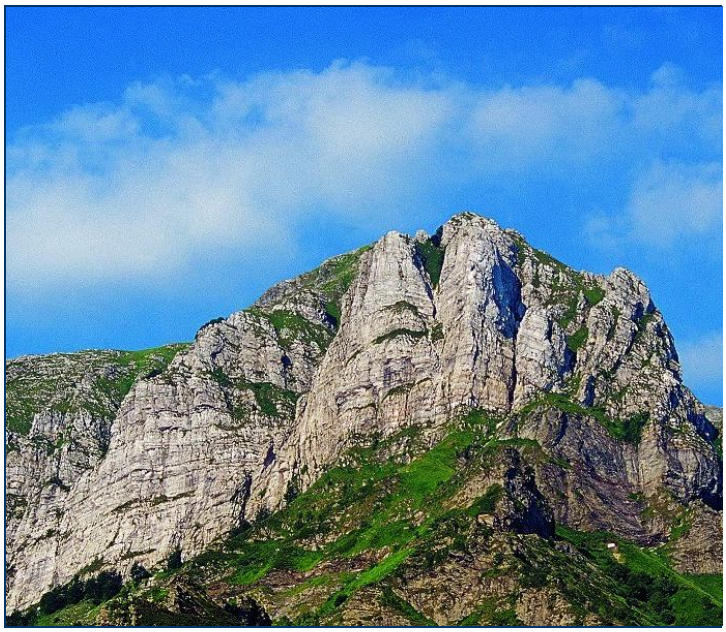
4 Corchia Hercynian unconformity

location	
region	Tuscany
province	Lucca
Municipality	Stazzema
sector	Corchia
toponym/locality	Passo Croce

interest	
scientific interest	stratigraphy geology
contextual interest	landscape hiking
interest evaluation	representative
level of interest	international

conservation status	
characteristic/condition	good
risk of natural deterioration	non-existent
risk of anthropogenic deterioration	non-existent



geological and environmental description

The Mesozoic-Tertiary cover of the Apuan Alps is angularly discontinuous with regards to the Paleozoic basement previously involved in the Hercynian deformation and metamorphism (greenschist facies). Despite the small number of fossils, the Pre-Triassic sequence of the Autochton *Auct*. has been reconstructed mainly thanks to its close lithological-petrographical similarities with the well-known fossiliferous sequence (Lower Cambrian-Devonian) of Central Sardinia.

The regional angular unconformity at the basis of the Alpine cover, (Mesozoic-Tertiary) stratigraphically lying over Paleozoic formations, is more evident on the western side of Mt. Corchia, near Passo Croce (1149 m). This area is characterized by a well-exposed typical Upper Cambrian-Silurian/Devonian section of the Tuscan basement. The Hercynian discontinuity is located between the graphitic-lydite phyllites (Silurian?-Devonian) and the basal siliciclastic rocks of "Verrucano" (Triassic).

From bottom to top, the sequence of the Paleozoic basement is composed of: a) lower phyllites and quartzites (?Upper Cambrian-Lower Ordovician); b) porphyroids and porphyritic schists (?Middle Ordovician); c) metasandstones, quartzites and phyllites (?Upper Ordovician); d) graphitic phyllites and lydites; Orthoceras-bearing dolostones (Silurian?-Devonian).

The Pre-Carboniferous sequence is discomformedly topped by metaparaconglomerates called "Anagenites" (Upper Ladinian-Carnic), belonging to the Alpine cover. In particular, lower phyllites (?Upper Cambrian-?Lower Ordovician) enables the reconstruction of the entire complex tectonic history of the Paleozoic basement. These rocks have relict deformation structures, which cannot be found in the Alpine cover and are ascribed to the Hercynian orogeny. The upper part of the lower Phyllites is characterized by a discontinuous level of paraconglomerates, which might be evidence of a Caledonian discontinuity. Finally, metavolcanites (porphyroids and porphyritic schists) have been linked to effusive and intrusive volcanic arc products, present in much of the southern European Basement (Middle Ordovician).

description of the level of interest

The Hercynian discontinuity of Mt. Corchia is a very important geosite already indicated in the international list by proGEO (1996). This valuable element of the geological heritage is often visited during fields trips by Earth Sciences Departments. The itinerary was proposed during the 32nd International Geological Congress (Florence, 2004) in the guidebook entitled *"The Paleozoic basement through the 500 Ma History of the Northern Apennines"*.