THE DRY-STONE WALLS OF MOUNT BISBINO AND GEOLOGICAL HISTORY

Observation point: from Cernobbio, coming up towards Mount Bisbino.

The walls along the route to Bisbino mount show a very typical aspect: they are built of a fine grained, light grey stone, which appears to be cut in large and flat, brick-like blocks. Actually, they aren't bricks at all, nor were they made into such flat shape by man's hand. In fact, they originate from a naturally layered limestone, an originally stratified rock, called Moltrasio limestone from the name of a nearby town.
It outcrops all around these mountains, lying sometimes horizontal, more often in large symmetrical folds, covering about 180 km^2.
This stone originates as a calcareous mud, made of unicellular beings, scales and fragments of bigger shells, deposited between 200 and 190 million years ago - at the start of the Jurassic period - on a sea bottom about 1000 m deep.
At that time, a very large gulf, the Thetis, penetrated between the two still united masses of future Africa and Europe. Over a large area, the sea bottom maintained for almost 100 million years the same depth and environmental conditions, so successive layers of the same monotonous sediment could accumulate, one on top of the other, up to a total thickness of about 2000 m.
However, there is a problem: for instance, the Po river has brought sand to the north western Adriatic gulf for only 2 million years, and filled it up, so that now the north western Adriatic gulf is an emerged plain. How can it be possible for more than 2000 meters of limestone to accumulate on the sea bottom during 100 million of years without filling the basin or at least changing its depth? Actually, tectonic subsidence was continuously increasing the depth of the bottom, allowing new space for sediments, but at the same time, sediment supply was filling the newly created void. In this way, an equilibrium between subsidence of the sea bottom - that is, its gradual downwards settling - and sedimentation permitted to the actual bottom surface to remain in the same position, until tectonic and environmental conditions didn't change.
The huge, monotonous bulk of Moltrasio limestone is theoretically an example of the complex interaction between geological factors in the evolution of an area. In practice, for thousands of years it has been a source of building material, not only for simple dry-stone walls, but also for large buildings, such as the local palaces and churches.