

PIANO LAKE NATURE RESERVE

We now have the opportunity to visit the Piano Lake Nature Reserve. Despite its modest size, this reserve has different and very close habitats that make it a paradigm of the natural and ecological landscape of the surrounding areas. Therefore, it is a synthesis of what we find outside even at great distances!

This reserve falls within the complex of protected areas by the Lombardy Region and is recognized as a Site of Community Importance (SCI with the code IT 2020001) by the European Union. The SCI is managed by the Comunità Montana Alpi Lepontine and covers an area of 176 hectares, half of which is occupied by the lake basin. The administrative boundaries of the SCI fall within the municipalities of Bene Lario and Carlazzo and the average altitude of the area is equal to 279 m.

Let's start with the origin of the lake, which is to be found in the Quaternary, during the last glacial phases.

Piano Lake is located in correspondence with the "Menaggio Line", an ancient tectonic fracture that marks the boundary between the Alps and the Pre-Alps in the area. During the last glaciations of the Quaternary, a branch of the Abduano glacier, which shaped the furrow of the Lario coming from the Valtellina and Spluga, crept into the Menaggio-Porlezza fault (the so-called Menaggio Line), joining other glacier tongues that descended from the Cavargna Valley and Rezzo Valley, eroding the mountain slopes, depositing debris laterally and thus building "moraines". The plain was modeled in a typical valley with a transversal "U" profile, suspended 75 meters above the water of the Lario, while the water of Lugano Lake penetrated the furrow, occupying the entire area. The whole valley was filled by glacial debris in varying thicknesses.

In the subsequent phase of deglaciation of the glaciers from the Cavargna and Rezzo valleys, there was a strong contribution of fine and coarse debris materials towards the valley, with the creation of two vast river cones. Further alluvial contributions from the streams continued in the obstruction work and the impetuous action of heavy rains discharged a considerable amount of fine debris downstream from the mountains, which together with plant and wooden remains dragged by the streams obstructed the valley creating Piano Lake.

The ancient glaciers did not only give rise to Piano Lake but also led to the formation of the so-called "Montecchi". These are promontories, elongated mounds, which stand out in the reserve and were then used over time as fortified hills. Their origin is consequent to the selective exaction or abrasion actions of the glaciers which erode the bedrock with their advancing tongues in different ways. Some portions are characterized by a greater resistance to erosion and then remain emerging compared to the surrounding areas, giving rise to "drumlins" as geologists call them or "montecchi" as the locals call them. In the reserve the Mirandola Montecchio and the Brione Montecchio are located. On the latter one the fortified rural village of Castel San Pietro was built. A third drumlin is named Montecchio Criaggia and it is located near the eastern borders of the Reserve.

The vegetation present in the reserve is strongly influenced by the lake. The aquatic and underground lake vegetation in particular can be considered an exemplary complex of the territory. The floating aquatic vegetation called lamineto is made up of dense colonies of white-water lily, Nannufaro and water chestnut that greatly reduce the amount of light reaching the bottom. This phenomenon limits the presence of the background macrophytic flora that is part of the Myriophyllum-Nupharetum grouping, a plant association typical of habitats with mesotrophic slow water.

However, the perilacustrine environment is characterized by helophytes, intertwining reed plants that colonize the edges of the lake, which invade the nymphaeum modifying the seabed with the constant accumulation of organic material.

Moving away from the lake we then find hygrophilous meadows, modified by regular cuts, attributable to the order of Molinietalia, but with a very diversified floristic composition in relation

to the anthropic impact suffered. Then, there are willow shrubs, particularly significant as those of the reserve represent the last surviving examples in the entire province of Como. Finally, we can observe mesophilic mixed broad-leaved woods where the association of *Tilio-Acerion* prevails. The fauna present in the reserve is rich and diversified, in fact we find roe deer, wild boars, weasels, stone martens, badgers and foxes, dormice, dormice, bats and shrews; in the water of the lake there are eels, carp and pike, rudd, tench and trout; the avifauna is very rich and ranges from the gray heron to the yellow wagtail, from the small to the blackcap, from the goldfinch to the great tit, from the owl to the black crow to the black kite to the red woodpecker and the buzzard.