

THE PIAN GEMBRO PEAT BOG

The Pian Gembro peat bog occupies a wide saddle located at the watershed between Valtellina and Valcamonica, a few kilometers north of the Aprica Pass. This site is one of the largest peat bogs in the Alps!

But what is a bog? Peat bogs are humid environments that derive from lakes or ponds that have been filled, over centuries or millennia, due to the gradual accumulation of peat. Peat is a material that originates from the progressive deposit of the dead parts of plants that grow in an area where water prevails and stagnates, such as marshes, ponds and lakes. Stagnant water and the consequent lack of oxygen prevent the complete decomposition of the plant tissues that accumulate on the bottom, progressively decreasing the depth of the basin. In this way the plants of the banks can be pushed further in, reducing the surface of the pond, until it disappears completely. Therefore, in a peat bog the remains of plants that have accumulated over time are present and still clearly recognizable, such as mosses, leaves, wooden fragments, and by sampling and classifying them it is possible for naturalists and geologists to know the vegetation present in the past and, if different from the current one, to reconstruct the environment or environments where it grew and developed.

The deposits of the Pian Gembro peat bog therefore represent an important natural archive of the history of environmental and climatic transformations that occurred in this sector of the Central Alps over the last 10000 years. The origin of the peat bog dates back to the last glaciation, about 10000 years ago, when a tongue of the Adda glacier flowed towards that of Oglio, shaping the Pian Gembro basin, then occupied by a lake which during the years it has been invaded by plant debris. The acidity of the soil and the lack of oxygen have slowed down the decomposition processes of the plant material, favoring the formation of the peat bog as already explained.

The substrate of the peat bog is made up of metamorphic rocks belonging to the Edolo Schist Formation, a paleozoic unit, sometimes crossed by magmatic manifestations such as tertiary porphyrites.

The peat bog has considerable dimensions: over 2 km long and about 300 meters wide. Studies conducted in the 1970s and supported by more recent ones have shown that the Pian Gembro depression is filled by glacial, lake and peat bog deposits.

From a naturalistic point of view, the simultaneous presence of low bog and high bog aspects is of considerable interest, the latter usually limited to the edges of the peat bog.

In the early years of the last century, peat extraction began mainly in the western sector for industrial purposes, leaving pits up to 2 and a half meters deep; moreover, sphagnum and ericaceae were collected to be used as litter in the stables. The presence of man has therefore played a strong role in disturbing the natural landscape on this site; however it has slowed down the burying of the peat bog and the disappearance of the plant species characteristic of these environments.

The vegetation has some species typical of the post-glacial periods and rare in our areas, making them therefore of particular botanical interest; in fact, we find the Bilberry, the *Andromeda polifolia* and the Horsetail. Equally important is the presence of carnivorous plants such as *Drosera* and *Pinguicula* from underground areas or *Utricularia* from waterholes.

The presence of the peat bog and the naturalistic peculiarities of the area make it a Regional Nature Reserve and a SCI, Site of Community Importance.