

# Piediluco Lake

## A) Characteristics

In the south-western tip of Umbria in the Terni province, bordering on Latium between the mounts Luco and Caperno, lies Lake Piediluco, (the second in size in Umbria after Trasimeno), it is like an Alpine lake with the Terminillo Mountain (2200mt.) as a backdrop. Its basin has an irregular shape: an elongated central body with several ramifications. It is because of this irregularity that its shores are exceptionally long, about 13 kilometres, compared to the surface of only **1.52 sq km**. The lake is approximately 370 meters above sea level and lies in front of the village of Piediluco (about 500 inhabitants), and reaches a depth of about 20 meters.

## B) Man's first intervention

Lake Piediluco, together with the smaller ones of the Reiti plain, is all that remains of the ancient lacus Velinus, alluvial in origin, it took form starting from the Quaternario as a consequence of the orohydrografical events involving the Nera and Velino rivers. It is thought that at the height of its maximum extension, Lake Velino covered most of the Rieti plain stretching as far as the Marmore waterfall. In 271 B.C., in order to reclaim the plain which was made marshy and insalubrious by frequent flooding, the Roman consul Manlio Curio Dentato had an open channel dug out of the rock (about 500 meters long) (Cava Curiana) that, starting from the western inlet, took the water right up to the edge of Marmore, where it still thunders down into the underlying River Nera. The Marmore Waterfall was born in this way, a magnificent sight, celebrated by the Great Tour travellers, artists, painters and poets from all ages, many of whom were also enchanted by the panorama and peace and quiet of Lake Piediluco.

## C) Its productive use

The Terni Steelworks which was established at the end of the 19th century used the waters of the lake to produce electricity; from its three main tributaries, two are artificial canals.

The first, approximately 400 meters, that substituted the natural tributary, joins the lake to River Velino and Cava Clementina and was made by the Terni Company around

the second half of the 20s, to increase the productive capacity of the hydroelectric power station of Galleto. The second, as long as 42 km, nearly all in a gallery, was built between 1929 and 1931 to channel the waters of the medium Nera River, diverted from its natural course. Virtually, the growing need for electricity on behalf of industrial Terni have transformed this sheet of natural water in a large dam of inflows and outflows regulated by man.

The Galleto power station (started up in 1928 and renovated in 1971) is fed by forced water pipes at a height of 202 meters with a flow of 226 cubic meters a second that drive the turbines with a power of 210 MW.

#### D) First considerations

The history of Lake Piediluco narrates a never-ending meeting between nature and the work of man.

The Valnerina valley, cradle of River Nera and River Velino, that flows into the lake and by man's hand forms the majestic Marmore Waterfalls by dropping into the waters of the Nera; this richness of elements was the reason why this area was chosen for one of the most important Italian industrial sites and as a consequence the establishment of a just as important hydroelectric centre for the production of clean energy. As a matter of fact, the exploitation of the lake as a hydroelectric dam has produced average oscillations of 58-53 centimetres over the past 15 years.

This water system can be represented as an "articulated and functional" meeting between nature and the intervention of man.

#### E) The present scenario

The waters of Lake Piediluco are open to four-stroke motor boats with a maximum power of 5 cv (3.7 KW) and for a maximum speed of 3 knots (5.5 KM/h). This goes to show how the community is trying to protect the integrity and environmental quality of the lake. Building works are subject to a regulating plan aimed at safeguarding the architectural identity of the small lakeside village.

This attention towards environmental compatibility can also be found in infrastructural interventions for the tourist development of the lake (going back 30 years) and is represented by the 'Paolo D'Aloja' Rowing Club, seat of the Italian Rowing Federation.

The stillness of the waters, the absence of currents, the mild winds all contribute in making Lake Piediluco an excellent place for regattas; the facilities of the federal

centre, gyms, labs, conference halls, etc... as well as the technical equipment for regattas and equipped spaces for spectators make it a prestigious place for national and international events.

## F) Conclusions

We cannot say whether Lake Piediluco in its age-old history represents a "good practice", if human interventions have damaged its environmental value or, on the contrary, if they have striven for a balance between "achievement of interests" and "safeguarding nature".

We do not know if the "long time" for the success of tourism in the lake area is caused by interventions that are not adequate enough to attract a "quantitative" demand.

Our intention is to continue with this trend of safeguarding the environmental resource, enhancing its identity and characteristics making it appreciated by a qualified segment of market able to recognize it.

Our hope is, for a long time yet, a tourist will still have the opportunity of hearing the two-hendecasyllable echo.