



## THE IMPACT OF CONSUMERISM ON OUR ENVIRONMENT

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### **The Zone of Safeguard of the river Stura di Lanzo**

The Safeguard Zone of the river Stura di Lanzo has been included in the Regional Parks system with the law of the Piedmont Region n. 27 of June 14, 1993 which, together with the equipped area of the Ponte del Diavolo, integrates it with the La Mandria Regional Park, already established in 1978. This stretch of the Stura has also been identified as SCI (site of Community interest) in 1995 in accordance with the Directives 43/92 / EEC "Habitat" and 79/409 / EEC "Birds" for the interest of the river environment well preserved in the vegetational and faunistic aspects, and because of the presence of the fossil forest geosite and, in particular, of the botanical entity *Carex hartmanii*.

This area belongs to the "Corona verde". The project known as "Corona verde" (Green belt), concerning 13 protected areas surrounding the city of Torino. These areas were considered by EU important community sites to preserve nature in the sense of 92/42 EU/Directive. They are very rich in biodiversity, as far as flora and fauna are concerned. Turin is a city with three rivers, which can offer to the people a great number of green areas for leisure time along the river banks. For this reason a project called "Torino citta' d'acqua" will be included in green belt which will connect royal castles with historical sites still present like Valentino and other disappeared (like Mirafiori Castle, Regio Parco).

The Safeguard Zone of the Stura di Lanzo guarantees a contiguity of the three protected areas (the Devil's Bridge (in Lanzo), the river strip along the Stura and La Mandria Park). So we have an ecological corridor that follows the watercourse to protect the diversity of forest, gravel and aquatic habitats, in which many species find conditions of optimal life. The Stura alternates long periods of thin water, especially in winter, to sudden flooding of the riverbed. For many years the river was under erosion with an engraving of the bottom, in which it erodes its deposits of coarse gravel to discover the underlying sediments of the Villafranchiano (Tertiary Age), which preserve a rare fossiliferous deposit. Nowadays, the climate change produces long periods of dry conditions following by storms that get worse the situation.

### **General aspects regarding this river**

The phenomenon of the riverbed lowering due to excessive gravel pick-up), then sold for construction (in a few kilometers there are 4 quarries here), drains the strata that, when it rains little, are no longer able to maintain a level adequate to guarantee sufficient water for the vegetation. In the hottest years (as for example in 2003) tall trees died, as their roots have no longer been able to catch water from the groundwater level.

According to the law, the harvest of material (gravel and sand) should take place only for the purpose of the hydraulic arrangement of the river, but once the harvest was heavy and extended from the banks to the river bed itself.

The negative consequences of this sampling were: increasing the speed of the water, a further increase in the loss of materials due to consequent erosion. The ridiculous thing is that in Italy has been sold gravel for construction to other European countries, who wanted to keep their water courses in balance.

The fluvial belt constituted a rich vegetal and faunistic environment that now is not so well preserved. The forest cover alternates tree-lined clearings, swampy areas with black alder, shrubby willow and pioneer vegetation near the riverbed and, on the most advanced soils, mixed woods with specimens of English oak with good habit and considerable size. The recovery of the quarry sites is heading towards the creation of pools of water that are quickly colonized by the typical spontaneous vegetation with sedges, cattails and rushes that offers hospitality to many species of animals related to humid environments including herons, mallard, water hen, piro-piro, little grebe, kingfisher and white-tailed

The gradual lowering of the Stura riverbed, some excavation works on the banks, the abandonment of cultivation and the consequent and repeated forest fires contributed to the degradation of the riparian environment, and not only that, so much so as to preclude its easy use. The landscape is the typical one that characterizes the gravel of the torrents of the Piedmontese plain. The bank is made up of gravely materials of large size on which during the dry periods finds the riparian vegetation, then torn from the torrential waters during the floods. Even in areas invaded by water only during periods of flooding close to the shores, vegetation has a modest development. It is concentrated in the lower and richer portions of fine sand where the roots are able to catch water directly from the stream. Predominate the shrub forms of willow from baskets, red willow and white, the latter here and there also in the arboreal state, along with black poplar and white poplar.

Widespread is the *Buddleia*, a species native to China able to spread rapidly on pebbly and poor soils to hinder the most typical local vegetation. Along the bank, now high in some points up to 7 meters, grow watercress and *Cardamine*, which take advantage of the rare outcrops of the water table.

At a greater distance from the watercourse the environment is currently barren and dry. Coppice woods are found in which prevails *Robinia*, an essence of very intrusive American origin. The undergrowth is represented almost exclusively by *Molinia*, a species that forms dense grassy heads that protect the buds of the plant, placed at ground level, by the frequent fires of which the *graminacea* is easy to bait.

Where the subsoil becomes stony, the juniper grows, with some plants such as the dog rose, the *Artemisia*, the mullein, the *Imperatoria*, while dense privet bushes are spread on the margins of the copse.

The water-loving species

The coppice of *Robinia* is interrupted by some abandoned tanks deriving from quarrying activities carried out in the 60s. At the edge of the water, where the depth is less, there is abundant hygrophilous vegetation, that is well adapted to the aquatic environment, consisting mainly of cattails, rushes, sedges and willows.

In this area we can also observe small groves of black alder, a forest species capable of adapting to damp and asphyxiated soils, generally not very present in the pure state.

The numerous wetlands in the area are formed by resurgences of clear and clean water along the abandoned riverbeds of the stream. In these environments interesting ecosystems are conserved, characterized by marsh plants such as: *Carex*, *Cyperus*, *Heleocharis*, *Typha*, *Potamogeton* and the *Nasturtium officinale* watercress.

The presence of *Matteuccia struthiopteris* is notable, a fern not common in Piedmont.

There are numerous springs, whose constant temperature of about 8 ° C offers even in winter an ideal habitat for watercress.

These spring waters are the ideal habitat for several species of Pisces, among which the very rare Lamprey *Padana Lethenteron zanandreaei*. Among the Amphibians and Reptiles, there is also the presence of the *Rana temporaria* frog, the *Zamenis longissimus* snake and the tessellated *Natrix tessellata*. Also present is the freshwater crayfish *Austropotamobius pallipes*.

### **Our walk**

In our walk we will go in the middle of the riparian forests of the Stura di Lanzo river, unfortunately left without treatment and therefore with a disorderly development in which the species grow without reaching the dimensions that characterize the most beautiful specimens and also of greater economic value.

Black and white alder, English oak, cherry, black poplar, cherry tree clusters and some white hornbeam (once there were also elms) are the species that characterize the last strips of the Po Valley forest, which we can see still there.



Together with the typical species of the plain forest there are exotic species such as the *Robinia pseudacacia* (used as firewood), a producer of substances that oppose the development of other species and thus able to invade spaces previously occupied by native plants, also because its roots are very extensive), the *Ailanth* (American) and the *Buddleja* (which attracts the butterflies with its flowers) .

Numerous bushes can be seen in the undergrowth: hawthorn, privet, *Euonymus europaeus* and *Cornus sanguinea*. Many hazels are spreading and even the elderberry is easily visible. We can also note bramble, which in summer produce edible fruits (blackberries).

Closer to the river, you will find a field maple, white poplar and some species of willow, but also the black alder that is able to fix nitrogen.

In the islands that have formed in the river bed, young birches and willows retain debris.

### **The Gôret**

Natural area subjected to a recovery plan tending to mend the wounds inflicted on the landscape by excavations. Here, thanks to the availability of water, the optimal environmental conditions for the once dominant vegetation has been recreated. In the local dialect, the name Gôret indicates riparian woods. The Gure are in fact the willows that grow spontaneously in this area, which were used to make baskets, tie vines and bunches of cobs put to dry.

The area preserves the old paths that led to the fords and the pedestrian bridges that allowed to cross the river and that were also used by those who - on foot - transported gravel from the river to construction sites.

In 1986, as mentioned, the areas of the Gôret - quarry site until then - were the object of environmental recovery, thanks to the passion of their owner and presently constitute a large wetland where the species of the ancient Po Valley plain forest are integrated with species typically lovers of water, as the excavations have become lakes. The amount of rain that falls feeds these basins and especially in the period when the birds migrate is an oasis for the rest of the migratory birds.



### **Paleontological site of the Fossil forest**

The floods that followed in the 90s have profoundly changed the morphological structure of the Stura di Lanzo. The fossil forest area present in the area has also undergone significant changes. After a period of "tranquility" (lean), characterized by a scarcity of observable finds (on the right bank above all, downstream of Grange di Nole), the full catastrophe of 2000 and the subsequent excavation works in the riverbed brought to light numerous trunks and stumps, some of considerable size and visual impact. The rumor has spread in the surrounding area and the Pliocene fossil forest of the Stura di Lanzo, after the long period of oblivion (local people knew it and during the Second World War collected wood to heat houses), has returned to be talked about. The renewed "celebrity" has, among other things, placed in a pressing way the problem of protection and enhancement, obviously intended as a use for dissemination and educational purposes. At the same time, the exhumation of numerous and significant finds provided the opportunity to pursue the study and research activity in a more in-depth and systematic way.

Currently, of the most conspicuous finds is no longer visible because removed from subsequent floods



### **Sanctuary of San Vito**

Just outside the protected area we find the Chapel of St. Vito, about two kilometers from the center of Nole, towards the Torrente Stura, in the middle of fields and woods. The precise age in which it was built is unknown.

The documents already exist at the end of the 16th century, although still very small. Built around a votive pillar, like many other sanctuaries, it was gradually enlarged in the 17th and 18th centuries. Its construction is due to "amazing healing received, among which is told of a cripple instantly healed that he left his crutches"; so the parish priest Don Chiaretta informs us (1898).

Widespread in S. Vito in 1700: testimony of this are the enlargements and embellishments, as well as the construction of the caretaker's house and a document of the provost Corio who in 1771 writes "it is used from all over the place in all needs".

The sanctuary is made up of a single central nave, to which two lateral chapels have been added (in 1702 and 1711) immediately at the entrance, and a larger chapel, where the ex voto are kept. Recently, a citizen of Nole the community of San Vito founded a community of devotees that involves people from all over Europe.

