

Proposal for the “Monte Po-Vallone Acquicella Sub Urban Territorial Park” (Catania, Italy): an experience of participatory environmental democracy

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ABSTRACT

The authors present the proposal for the establishment of the *Monte Po-Vallone Acquicella Sub Urban Territorial Park* covering a total area of about 220 ha from the Monte Po hill (north-west of Catania, Italy) to the mouth of the Acquicella river along its course. The objective of establishing the Park is the protection of the landscape, naturalistic and cultural values being part of its territory. At the same time, the park would consolidate the function of reconnecting the urban complex of the historic part of the city with the peripheral neighborhoods that arose over time to the west of the Acquicella river, contributing to resolve its marginality. Furthermore, the Park would represent a significant green lung available for sustainable fruition for the benefit of the Catania community and not only, given its contiguity and proximity to other important urban centres. The different aspects of the proposal are then illustrated.

KEY WORDS

Sub-urban territorial park proposal; values and purposes of the park; city involved Catania, Italy.

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INTRODUCTION

by Giuseppe Rannisi, Lega Italiana Protezione Uccelli, LIPU-Catania

A large urban park on the hill of Monte Po (Fig. 1) was envisaged in the Urban General Plan (PRG) of Catania (Sicily, Italy) which came into force in 1969, but not yet being achieved. A park designed to provide social services and greenery to the urban suburbs of the southern territory of Catania, where in the post-war period a part of the city’s population was transferred (Librino, Monte Po, Villaggio S. Agata), to which a substantial volume of “spontaneous” construction was later added (San Giorgio, Fossa Creta, etc.) (Fig. 2).

In 1999, the Municipality of Catania, through the Councilor Paolino Maniscalco, launched a Park project. An agreement was signed with the Valdisavoia Institute, owner of about 40 hectares of land to be allocated to the Park, and the compulsory purchase was initiated for another 28 of the 151 hectares envisaged in the project, a procedure concluded with the Managerial Decree no. 34/2002.

The initiative for the protection of the area was initially undertaken by some environmental associations that promoted the protection of its naturalistic values by asking to extend it not only to the hill and the neighboring eastern areas but also including the entire course of the Acquicella river up to its mouth.

In particular, in 1999 LIPU, (see proposal by LIPU, ref. 48/99 of the 4/5/99, addressed to the Mayor, the Councillor for Urban Planning and to the Council Groups of the Catania Municipality with the subject: *Catania Sud Territorial Pact - Observations and Proposals*), asked the Municipality for the protection of the river mouth area, reiterating it in 2005 with the request for the inclusion of the *Vallone di Fossa Creta* (see proposal by LIPU, ref. 10/2005 of the 22/03/2005, addressed to the President of the Council Commission for Public Works of the Catania Municipality with the subject: *Observations on the General Regulatory Plan*).

In 2006, LIPU and WWF together asked the Municipality (see proposal by LIPU and WWF, ref.

1/12/2006 addressed to the Mayor, to the Council Group Leaders and to the trade unions (CGIL, CISL, UIL) of Catania with the subject: *A General Regulatory Plan that is not up to date*) for the naturalistic protection of the surrounding areas, Monte Po, Fossa Creta, the Acquicella river and the 1669 eruption's lavas and proposed to avoid building in the same areas. Several newspapers wrote about this issue (1 - "Gazzetta del Sud", 24/01/2007 page 30, titled: "LIPU and WWF reject the urban planning instrument being approved by the City Council: General regulatory plan deficient and lacking. Not even an energy plan. The mobility system does not improve air quality". 2 - "Giornale di Sicilia", 01/24/2007, page 23, titled: "For LIPU and WWF, the Regulatory Plan is illegal". 3 - "La Sicilia", 01/25/2007, page



Figure 1. Above and below: panoramic views of the Monte Po area. In the background Catania and Etna.



Figure 2. In blue the perimeter of the proposed park integrated with the “Plaja Grove” and with the lava (eruption 1669) located in the San Cristoforo district. The connection function between most of Catania and the suburbs of the southern outskirts of the city is evident.

37, titled: “*The complaint of Lipu and WWF: “A Regulatory Plan incomplete and therefore unworkable”*”).

New initiatives (proposal (22/06/2011) by Italia Nostra association jointly with the former Municipalities I, VII, VIII, IX and X of the Municipality of Catania concerning the river park of Acquicella) to awaken interest in the area were proposed in 2011 by Italia Nostra. The association proposed the protection of the watercourse. LIPU and WWF (proposal by Lipu and WWF (on the 5/10/2011) to the Municipality of Catania for the recognition of the course of the Acquicella as an urban park and its mouth as a Nature 2000 site) re-proposed the protection of the area of the mouth of the Acquicella by presenting a new research on the flora and the fauna in support of the description of the area as a “*Natura 2000 site*” under the European Birds (Directive 2009/147/EC) and Habitats (Directive 92/43/EEC) Directives.

On the 31/01/2019 during a preparatory meeting, as remarked on the new Catania Urban General Plan (PRG now PUG), the Associazione Idrotecnica

Italiana and the LIPU-BirdLife re-proposed the need to include the protective measures of the areas of the Vallone Acquicella in the General Directives for the drafting of the PUG: the proposals were accepted (see the resolution of the Catania City Council. no. 23 of 26/10/2019, pg. 52-54, entitled: Il sistema ambientale e il verde urbano e agricolo [The environmental system and urban and agricultural greenery]) but without effect as the PUG did not see the light.

In July 2022, 26 environmental and/or social associations (*Cittainsieme, Comitato Antico Corso, Comitato Generazioni Future, Ente Fauna Siciliana, Fridays for future, Iniziativa Femminista, Italia Nostra Sezione di Catania, La Ragna-Tela, Legambiente Catania, Lions club Catania Gioeni, Lipu Sezione di Catania, Mascalucia 2030, Osservatorio Politiche Urbane e Territoriali, Presidio del Patto Partecipativo del Fiume Simeto, Rete Piattaforma per Librino, SiciliAntica Sede di Catania, Sunia, Unione Exallievi don Bosco Catania-Salette “Periferie Vive”, WWF Sicilia Nord-orientale*) sent a dossier to the municipal

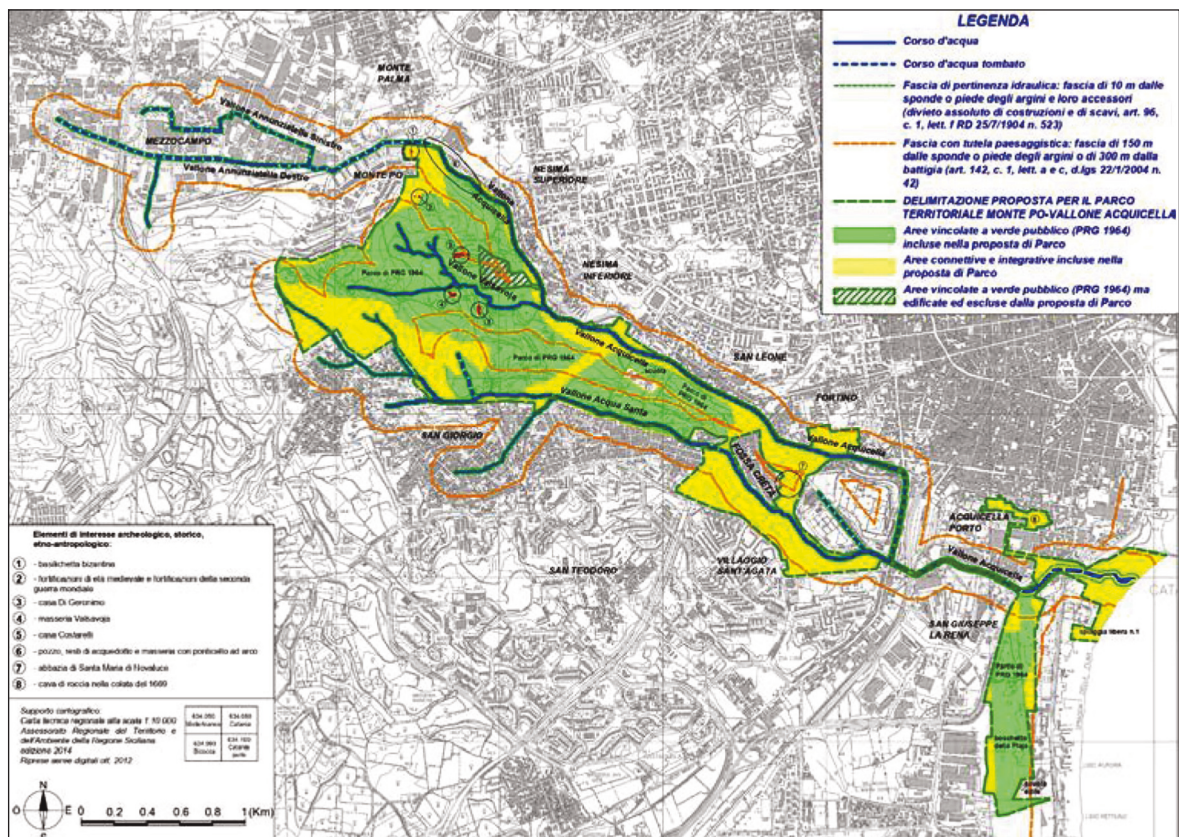


Figure 3. The hydrographic network of the Vallone Acquicella and the delimitation proposed for the “Monte Po-Vallone Acquicella Sub Urban Territorial Park”. In green the areas already designed as parks in the Catania PRG, in yellow the proposed expansion (from Alecci, 2023).

administration, asking for the establishment of a large park of about 220 hectares. The territory involved would have expanded from the hill of Monte Po down to the sea (Fig. 1) along the course of the Acquicella river, summarizing everything produced so far in support of the proposal of the Monte Po-Vallone Acquicella sub-Urban Territorial Park.

This interest in the hill of Monte Po, the Vallone Acquicella and its river mouth area is due to the intrinsic naturalistic and anthropic realities of the areas as well as to the social, urban and ecosystem services that these areas can provide and which are described in the various themes discussed below.

The proposed park would also have the function of rejoining the historical, touristic and commercial city with the southern part of the city, reducing the gap between the different districts. The project also includes the historic grove “*Boschetto della Playa*” (located south of the city) and the residuals of the lava front from the 1669

Etna’s eruption located on the southern edge of the San Cristoforo district.

It is also desirable that the management of the Park can involve the community of citizens who live around the area and the Associations operating in the area, in agreement with the Municipality of Catania and with the other competent institutional bodies.

The following chapters highlight the naturalistic and cultural reasons that motivate the proposal for the establishment of the Park including the hydrographic network of the Vallone Acquicella (Fig. 3).

GEOLOGICAL AND GEOMORPHOLOGICAL FEATURES

by Stefano Pannucci, member of the Lega Italiana Protezione Uccelli

The structural assessment of the Monte Po area

is important because it is located on the most advanced nappe of the Gela-Catania foredeep, among the Apennine Chain and the African Plate, in a compressional regime that slowly and constantly pushes the African Plate against the European Plate. Recent studies highlight the presence of an anticlinal structure with an ESE-WNW axis, involving the stratigraphical successions here occurring, indicating a N-NE vergence of the covering nappes.

Etna is the largest active volcano in Europe, extending over more than 1,200 km² and recently reached an altitude of 3369 metres above sea level over the top of Voragine into the Central Crater. The volcanic district was formed about 500,000 years ago, over the sedimentary layers of clayey-sandy formations, with its numerous lava flows reaching the city of Catania on the south/south-East slopes.

The rocks (Fig. 4) on which the lava flows rest are the result of a sedimentary succession of a regressive phase, consisting on grey-blue clays, "San Giorgio" sands and conglomerates and gravels of "Monte Tiriti", dating from the Lower Pleistocene to the Middle Pleistocene (from about 1,500,00 to about 120,000,00 years ago). Recent alluvial-conglomeratic sediments generated by fluvial terracing and alluvial deposits, overlies the entire sedimentary and volcanic sequence. There are also sediments of lacustrine origin deposited following the damming of the original watercourses operated by lava flows.

Volcanic origin outcrops are extensively represented in the area by the basaltic flows produced by the 1669 eruption, a unique historical eruptive event, in terms of its effusive and destructive dynamics, that affected the southern portion of the volcano.

THE HYDROGRAPHIC NETWORK OF THE ACQUICELLA VALLEY AND ITS REDEVELOPMENT

by Salvatore Alecci, President of the Associazione Idrotecnica Italiana Sezione Sicilia Orientale

The Vallone Acquicella is the northernmost of the small watercourses whose beds originate from the clay hills, preceding the Etna volcanic edifice, which extend from Catania to Motta Sant'Anastasia and which constitute the anticline of the so-called *Terreforti*. Indeed, for about two-thirds of its route its bed marks the border between the volcanic soils, on the left bank, and, on the right bank, first the clay formations and then the alluvial plain created by the same watercourse. In this stretch the bed is flanked by the lava flow of 1669, which occupied the old bed forcing the waters to create a new one. Unlike the other small watercourses, whose basin is entirely downstream of the *Terreforti*, the Vallone Acquicella originates beyond the anticline and a significant portion of its catchment area falls on volcanic soils with very high

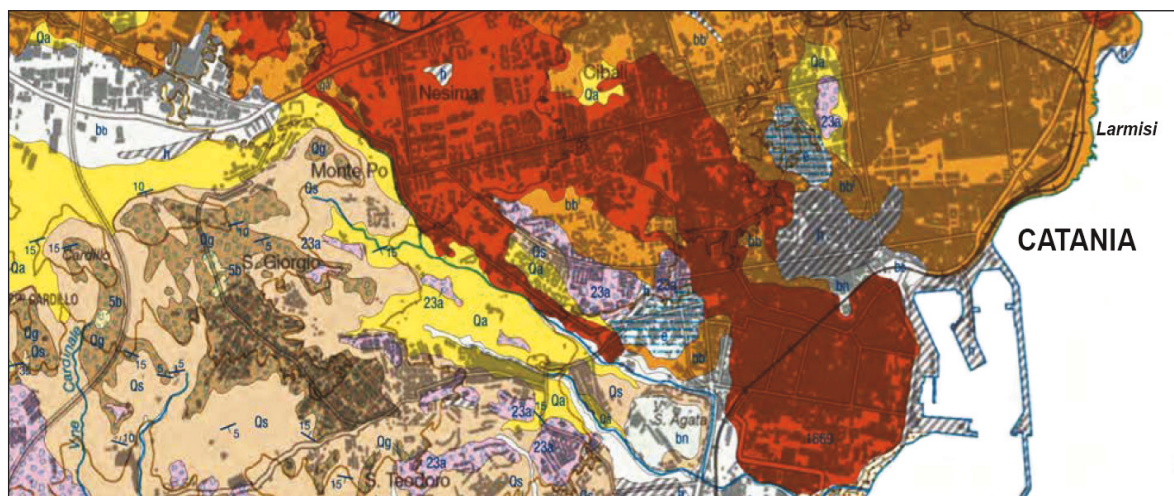


Figure 4. Geological map of the territory. In red the lava flow of 1669 (red); in brown previous lava flows; sedimentary outcrops (other colours).



Figure 5. Several examples of stream restoration (from Alecci, 2023, modified)

permeability, from which surface flow is almost zero, while underground flow is considerable. The geological (Carbone et al., 2009) conformation suggests that the hydrogeological basin is much larger than the catchment area, with underground contributions from the north, east and even west. This singular hydrogeological condition means that the Vallone - unique among those watercourses - has flows throughout the year, even if with significant variations in flow.

Figure 3 highlights the hydrographic network, along with the proposed perimeter for the Park. The watercourse originates in the territory of Misterbianco from some springs in the Milicia district. In its first stretch, the watercourse is called Vallone Annunziatella or Nunziatella and has two branches: Right and Left, both now entirely covered in concrete and largely buried. From the confluence of the two branches, in the territory of Catania, it takes the name Vallone Acquicella which it retains up to the mouth. Also in the territory of Catania, the riverbed is entirely covered in concrete or stone masonry, except for a short stretch crossing the lava flow, where the watercourse flows over the rock forming a rapid. In two stretches, the riverbed is buried: under the road that

runs alongside the Monte Po district and under the eastern carriageway of Via Acquicella, between the cemetery and the railway. The riverbeds of its tributaries, Vallone Valsavoja and Vallone Acqua Santa or Carcaci, are in natural conditions, except for the valley part of Vallone Acqua Santa.

The park's proposal (Alecci, 2023) includes the redevelopment of the riverbed to restore semi-natural conditions. Redevelopment is possible along almost the entire route, except for some sections where urbanization has come so close to the riverbed that it is impossible to widen the section, a necessary condition to allow redevelopment without reducing hydraulic functionality (Fig. 5).

The redevelopment will be done by demolishing - wherever possible - the bridles and concrete coverings of the banks and the bottom and reshaping the section with greater width and with earth bottom and banks and using naturalistic engineering techniques. Where necessary, reefs, gabions and palisades will be built.

The new riverbed shape and the types of redevelopment will be defined by careful planning supported by a hydrological-hydraulic study for the estimation of the flood hydrographs and the delimitation of any expansion areas.

FLORA AND VEGETATION OF MOUTH, STREAM AND SURROUNDING ENVIRONMENTS OF ACQUICELLA RIVER SYSTEM

by Rosario Ennio Turrisi, Founding Member of WWF, Catania Section

In this studies flora and vegetation survey of the Acquicella river system, mouth, plateaus, hills and slopes, are provided. The vegetation belongs to the thermo-Mediterranean climatic band, basal Mediterranean Belt, thermo-Mediterranean horizon (Fig. 6). It includes 29 plant communities some of which known for Acquicella river (Bonanno & Lo Giudice, 2009) with physionomic, ecological, biologic different (halophilic psammo, elophile, hygrophilous, xerophilus communities) and belonging to 15 vegetation Classes. Along the river biogeographically and ecologically interesting are *Populus alba* L. and *Ulmus minor* Mill. subsp. *canescens* Bartolucci & Galasso population and fragmentary presence of *Salicetum albo-pedicellatae* Brullo & Spampinato, 1990. In addition, swimming hydrophyte vegetation *Lemno-Spirodeletum polyrhizae* Koch 1954, constituted of *Spirodela polyrhiza* (L.) Schleid. known in Sicily only in two stations and very rare in Italy.

Some environments, plant communities (Fig. 6) and species present in the study area are included in the HABITAT 92/43/CEE Directive. As regards the flora, it is characterized by 13 entities with ecological, phytogeographical and floristic importance: which *Ononis pubescens* L., indicated for Monte Po (Catania) (Giardina, 2000), they represent the unique Italian sites; *Spirodela polyrhiza*, is known in two sites in Sicily and considered rare in Italy. Finally, *Rumex dentatus* L. subsp. *callosissimus* (Meisn.) Rech. f., known in Italy only in the Acquicella river. Two species are included in the regional red list: *Launaea resedifolia* (Lower risk) and *Spirodela polyrhiza* (Critically endangered).

ORNITHOLOGICAL FAUNA

by Dario Grimaldi, member of the Lega Italiana Protezione Uccelli, and Giuseppe Rannisi

The fauna of the sandy coastline and the mouth of the Acquicella river is very rich in species as it is part of the coastal ecosystem of the Catania Plain.



Figure 6. Aspects of Mediterranean scrub present in this area of Monte Po-Vallone Acquicella.

It is quite similar to that present in the area of the mouth of the Simeto river, which due to its environmental values has been declared Natural Reserve of the Sicilian Region and Natura 2000 Site (D'Ambra et al., 2002; Rannisi, 1986) (Fig. 7).

In particular a detailed study on the ornithological fauna of the Simeto river mouth and the adjacent internal wetlands can be found in Ciaccio & Priolo (1997). Today, with the exception of a few areas near the mouth of the Simeto river, almost the entire seashore is largely degraded by second home buildings and bathing sandy beach areas.

The seashore area that we intend to protect with this park proposal includes the northern side of this coastal system as, although modest in size, is of great importance.

In addition to this beach line, the Park territory includes the Acquicella watercourse, cultivated and formerly cultivated fields, areas undergoing renaturalization, grazing areas; thus the plurality of habitats is home to numerous species of birds.

On the coastline, a transition element between sea and land, various species of waders are observed; the Kentish plover (*Anarhynchus alexandrinus* Linnaeus, 1758 ex *Charadrius alexandrinus*), the Little ringed plover (*Charadrius dubius* Scopoli, 1786), the Sanderling (*Calidris alba* Pallas, 1764), the Dunlin (*Calidris alpina* Linnaeus, 1758), the Greenshank (*Tringa nebularia* Gunnerus, 1767), the Redshank (*Tringa totanus* Linnaeus, 1758), the Spotted Redshank (*Tringa erythropus* Pallas, 1764), the Little stint (*Calidris minuta* Leisler, 1812), the Bar-Tailed Godwit (*Limosa lapponica* Linnaeus,

1758), the Oystercatcher (*Haematopus ostralegus* Linnaeus, 1758); here, lives a great variety of invertebrates, crustaceans, molluscs and insects which the waders feed on. At the apical levels the food web is represented by birds such as Charadriiformes or the Kentish plover (*Charadrius Anarhynchus alexandrinus* (Linnaeus, 1758) and the three-toed sandpiper *Calidris alba* Pallas, 1764: also marine arthropods, such as some species of crabs, live in this habitat which is as important as it is vulnerable to alterations by anthropic origin.

Entering the river the environment is completely different and is typical of lowland rivers, with slow, fresh water. The vegetation consists of typical marsh plants. The Marsh reed (*Phragmites* sp.) covers the banks, which are associated with tufts of *Typha* sp, while on the outermost banks of the river the Common reed (*Arundo* sp.) takes over. Here you can meet the Purple swamphen (*Porphyrio porphyrio* Linnaeus, 1758) which has returned to settle in the humid environment of the Acquicella mouth after its reintroduction in Sicily, the Moorhen (*Gallinula chloropus* Linnaeus, 1758), the Coot (*Fulica atra* Linnaeus, 1758), the Mallard (*Anas platyrhynchos* Linnaeus, 1758), other species of ducks such as the Eurasian Teal (*Anas crecca* Linnaeus, 1758), the Northern Shoveler (*Spatula clypeata* Linnaeus, 1758), the Gadwall (*Mareca strepera* Linnaeus, 1758), and then the Great Cor-

morant (*Phalacrocorax carbo* Linnaeus, 1758), the Little Grebe (*Tachybaptus ruficollis* Pallas, 1764), the Great Crested Grebe (*Podiceps cristatus* Linnaeus, 1758) and the Black-necked Grebe (*Podiceps nigricollis* Brehm, 1831) and many species of herons including the Grey Heron (*Ardea cinerea* Linnaeus, 1758), the Great White Egret (*Ardea alba* Linnaeus, 1758), the Squacco Heron (*Ardeola ralloides* Scopoli, 1769), the Black-crowned Night-heron (*Nycticorax nycticorax* Linnaeus, 1758); in the reeds you can hear the Reed Warbler (*Acrocephalus scirpaceus* Hermann 1804) and the Cetti's Warbler (*Cettia cetti* Temminck, 1820) singing.

The mouth area is also an important roost for many Larids of different species including the Black-headed Gull (*Larus ridibundus* Linnaeus, 1766) which is the most numerous species, several thousands. Other species of gulls regularly are wintering, or stop during migrations: hundreds of Lesser Black-backed Gulls (*Larus fuscus* Linnaeus, 1758), the Slender-billed Gull (*Larus genei* Brème, 1839), the Mediterranean Gull (*Larus melanocephalus* Temminck, 1820), the Little Gull (*Hydrocoloeus minutus* Pallas, 1776), the Sandwich Tern (*Thalasseus sandwicensis* Latham, 1787), the Caspian Tern (*Hydroprogne caspia* Pallas, 1770), the Common Tern (*Sterna hyrundo* Linnaeus, 1758), the Common Gull-billed Tern (*Gelochelidon nilotica* Gmelin, 1789).



Figure 7. Significant examples of the ornithofauna present in the park area. On the left, the Purple swamphen (*Porphyrio porphyrio* Linnaeus, 1758), on the right the Kentish plover (*Anarhynchus alexandrinus* Linnaeus, 1758).

Proceeding westwards, in areas without vegetation you can observe the White Wagtail (*Motacilla alba* Linnaeus, 1758) or the less common Grey Wagtail (*Motacilla cinerea* Tunstall, 1771) hunting for the insects they feed on. Instead, where you come across groves of White Poplar (*Populus* sp.), White Willow (*Salix* sp) and Elm (*Ulmus* sp.), it is easy to hear the song of the Cetti’s Warbler, the Blackcap (*Sylvia atricapilla* Linnaeus, 1758) or the rare Thrush Nightingale (*Luscinia luscinia* Linnaeus, 1758).

Continuing towards the source, in the more open areas of the two valleys, which culminate with the Monte Po hill, there are isolated oaks, even large ones, cultivated and formerly cultivated fields, shrubs, white poplar groves, grazing areas. Here it is possible to observe the Common Buzzard (*Buteo buteo* Linnaeus, 1758) and the Common Kestrel (*Falco tinnunculus* Linnaeus, 1758) hunting for some rodent or reptile, the Crested Lark (*Galerida cristata* Linnaeus, 1758), the Common Stonechat (*Saxicola torquatus* Linnaeus, 1766), the Woodchat Shrike (*Lanius senator* Linnaeus, 1758), the Corvids such as the Eurasian Magpie (*Pica pica* Linnaeus, 1758), the Hooded Crow (*Corvus cornix* Linnaeus, 1758), the Bee-eater (*Merops apiaster* Linnaeus, 1758), the Sparrows (*Passer italiae* Vieillot, 1817) and (*Passer montanus* Linnaeus, 1758), several species of finches: Goldfinch (*Carduelis carduelis* Linnaeus, 1758), Eurasian Chaffinch (*Fringilla coelebs* Linnaeus, 1758), Greenfinch (*Chloris chloris* Linnaeus, 1758), Siskin (*Spinus spinus*, Linnaeus, 1758), Serin (*Serinus serinus* Lin-

naeus, 1766) and owls as the Little Owl (*Athene noctua* Scopoli, 1769), Long-eared Owl (*Asio otus* Linnaeus, 1758). All this evidence points to a good quality of the environment.

As many as 115 species of birds have been recorded along the entire course of the river, many of them included in the Annex 1 of the EU Birds Directive 2009/147/EC (Fig. 6).

PERSPECTIVES FOR THE SABULICOLOUS ARTHROPODS AT THE MOUTH OF THE ACQUICELLA

by Alfredo Petralia, former zoology professor at the Catania University, member Association Ente Fauna Siciliana, member Association Ex Allievi don Bosco Catania-Salette “Periferie Vive”

The sandy area of the mouth of the *Acquicella* represents the last strip of coastal dune environment closer to Catania as a residual of the psammic system which once extended continuously from the lavas of 1669 up to the limestone ridge of Agnone Bagni, a system whose naturalness has underwent profound transformations for agricultural, tourist-seaside and road constructions. For this naturalistic interest in and of itself, the dune environment of the *Acquicella* mouth deserves protection actions.

The inclusion of the area inside the perimeter of the Park has the aim of allowing its conservation and spontaneous renaturation while limiting anthropogenic disturbance. In particular, this could favour the presence of an Orthopteran Grillid, *Brachytrupes*



Figure 8. Left: *Brachytrupes megacephalus* (Lefebvre, 1827); right: *Parallelomorphus laevigatus* (Fabricius, 1792).

pes megacephalus (Lefebvre, 1827) (Conti et al., 2012; Petralia et al., 2021) (Fig. 8), a typical dune insect, protected species of European interest, significantly present until the 1970s and today almost disappeared. Similar considerations can be made for birds such as the

The protection of the shoreline is also important as it is rich in biodiversity (Conti et al., 1995; D'Ambra et al. 2002), which takes its sustenance from organic debris (as the Tenebrionid *Erodius siculus* Solier, 1834) washed up by the sea or transported there by the wind. There are several species of terrestrial arthropods living there, that represent different elements of the trophic chain. That chain, from the detritivorous Amphipods, such as the amphipod *Talitrus salutor* (Mongagu, 1808), leads to predators such as the Dermapter *Labidura riparia* (Pallas, 1773) or the Carabid *Parallelomorphus laevigatus* (Fabricius, 1792) (Fig. 8).

In particular as regards as *Parallelomorphus laevigatus* many aspects of its behavioral ecology are known (Caltabiano et al. 1984); it is equipped with astronomical orientation highly studied along the Catania sandy coast (Costa et al., 1982a, 1982b, 1983, 1990); it is also studied as potential pollution indicator (Conti et al., 2017); a long term monitoring (Conti et al., 2012) has highlighted its extreme rarefaction in the shoreline area here considered. The protection of the sandy beach at the mouth of the Acquicella, in particular the interruption of beach cleaning operations by mechanical means (which has a negative effect on the animal populations that live there), could favour the reconstitution of the population.

ARCHAEOLOGY AND HISTORICAL-SETTLEMENT ASPECTS

by Pinella Marchese, archaeologist, former director Sicily Region Monte Po and Acquicella territorial park-Archaeology of the area

The Nesima district, located to the northwest of the city of Catania, includes the hill of Monte Po with the flat area at its base. These areas of the Catania territory have undergone significant morphological transformations and upheavals since the 1960s due to the implementation of urban and commercial building programs. Today, it is difficult to recognize the original morphology of the places and recon-

struct the environmental and historical context. During archaeological research conducted by the Superintendence of Catania between 1992 and 1995, an architectural complex was discovered, including a powerful apsidal structure (Marchese 2003) with lava stone blocks and connected walls outlining the floor plan of a single-nave Latin cross basilica from the medieval era. The archaeological research has shown that the area proposed for the Territorial Park has been inhabited since antiquity. Nesima and the hill of Monte Po are part of a complex hill system, a natural barrier in a territory that Frederick II of Swabia fortified with castles and mottes in the Middle Ages, but already populated in late antiquity by scattered farms and homesteads in the verdant low and middle valley of the Simeto River, rich in water resources and fertile due to ash from Mount Etna (Marchese, 1997). The Antonine Itinerary or Provinciarum, a collection of late antique routes, refers to the road from Misterbianco to Catania, skirting the Roman aqueduct; it mentions the summit of Monte Po with the ruins of a fortification (Uggeri, 2004). Recently, an ancient structure in ruins was discovered at the top of Monte Po hill. This rectangular building (dimensions: 875 x 955 meters) without a roof is defined by perimeter walls that are preserved up to 2.25 meters high. The walls, about 1 meter thick, show an *opus incertum* with a core in cementitious work, confirming 18th-century writings about the existence of fortification ruins on the summit of Monte Po by Ignazio Paternò Castello, Prince of Biscari (Paternò Castello, 1781), and evidenced by a watercolor by Houel depicting a building identifiable with the one described above (Pagnano, 2001). Literary data (Sciuto Patti, 1892; Pace, 1949) and investigations in the 1990s have shown that the medieval building phases (Fig. 9) are based on settlements from the 6th-7th century AD (Marchese, 1997), such as an area for prayer with a small basilica edited by Libertini (Libertini, 1928; Libertini, 1932). According to late imperial sources, the hill of Monte Po and the adjacent heights were marked by boundary stones in the 3rd or 4th century AD delimiting the estates of Vibio Severo and dominated (Uggeri, 2004) a road axis that through the Nesima district connected Catania with the Etnean hinterland. In the neighboring municipal territory of Misterbianco, there are remains of an ancient aqueduct and a Roman-era thermal plant. Enhancing the remains of the settlement contexts and their hy-

draulic systems means preserving collective memory through the protection of the landscape with the material testimonies present in it for an integral economy of the human communities that inhabit and live in the territory itself.

FURTHER HISTORICAL-SETTLEMENT VALUES

by Edoardo Tortorici, member Association Italia Nostra

During recent surveys, already mentioned, conducted by the Chair of Ancient Topography of the University of Catania, it was possible to recognize, even though almost entirely covered by spontaneous vegetation, the remains of a basilica (Fig. 10) attributed to the Byzantine era, already partly excavated in 1990 by the Superintendency of Catania. The parts of the Basilica (Largo Alberto Favara) relating to the apse and the beginning of the division into three naves came to light. The research, based on photointerpretation, allowed the entire system to be reconstructed and confirmed the planimetric layout of the religious building, entirely with three naves, surrounded by pit tombs dug into the surrounding land.

South of via Palermo and the Acquicella torrent, the remains of some arches of an ancient aqueduct, dated to the Roman era, are still visible today, interspersed with modern walls.

Almost at the top of the hill are visible the ruins belonging to a structure unfortunately in a state of ruin, already illustrated by P. Marchese. Finally, it is obligatory to mention the discovery, always at the top of the mountain, of scattered fragments of African sigillata D pottery, datable to the 5th-6th century AD. Of great interest, again, is the discovery of some wall structures in lava chips on the south-eastern side of the slopes of the hill, which should perhaps be referred to fortifications. Finally, the first occupation of the Monte Po area could be dated to the ancient Bronze Age, thanks to the discovery of a ceramic fragment attributable to the Castelluccio culture.

Other structures dating back to the medieval age have been recognized near the so called “Pittarosso shopping center”. It is a structure in opus incertum with lava chips, almost entirely covered by the ground. It is very likely that some news from schol-



Figure 9. Ruins of a structure located on the top of Monte Po, attributable to a medieval phase. Etna in the background on the left.



Figure 10. Photointerpretation of the general plan of the Byzantine Basilica of Monte Po.

ars at the end of the nineteenth century refers to these remains (Sciuto Patti, 1892). In summary, I think we can propose the existence of a widespread settlement system, within a large hilly area with purely defensive functions for the sea outlet of the Acquicella torrent.

ABBEY AND CHARTERHOUSE OF SANTA MARIA NOVALUCE

by Adolfo Longhitano, professor emeritus at the Theological Faculty of Sicily “Studio Teologico S. Paolo”, Catania

In the project to establish the Monte Po – Vallone Acquicella park in Catania, a visit to the ruins may represent a very interesting stop for tourists the char-

terhouse/abbey of Nuovaluce (Fig. 11) (Longhitano, 2003) which stood on the hill adjacent to the cemetery. It was built in 1370 by Artale Alagona, descendant of the Catalans who came in the wake of Peter III of Aragon after the Sicilian Vespers, in the period in which Catania was in fact the capital of the kingdom of Sicily. Artale, after the death of his father Blasco (1355), became guardian of the young King Frederick IV and leader of the Catalan partiality.

At the height of his power he decided to build a charterhouse (1370) in the place where the church dedicated to the Madonna of Nuovaluce, much venerated by the people, already existed in Catania.

The new charterhouse was generously endowed with movable and immovable property, but various adverse circumstances did not allow it to establish itself over time. Two causes above all, malaria and the great Western schism influenced its closure.

In the summer of 1378 most of the monks fell ill and many died malaria. In the same year the Western Schism began. The Carthusians, who they were French, followed the Pope of Avignon and decided to leave the Charterhouse of Catania.

Artale Alagona offered the building to the Benedictines of the cathedral (1381). In 1643 Benedictines left the abbey, which was given to the Discalced Carmelites. In 1651, the Augustinians took over, which, after the earthquake of 1693, decided to abandon the historic building destroyed by the earthquake. The land on which it stood was sold

to private individuals and a farm was built on the ruins of the charterhouse/abbey.

MILITARY STRUCTURES AT THE TOP OF MONTE PO

by Giambattista Condorelli, member Association "Sicilia Antica"

In anticipation of the involvement of Catania town in the most acute phase of the Second World War, the metropolitan territory was divided into 7 defensive strongholds, one of which was installed close to the top of Monte Po (Fig. 12). It was designed to house the pieces of an artillery emplacement anti-aircraft and the emergency shelters of the military personnel assigned to the station and also to store the ammunition and other material necessary for the activity of the station indoors.

The works created on that occasion was not hit by aerial bombing, except for one small one, so they are still intact and easily accessible to the public.

They consist of two cylindrical structures in reinforced concrete, without covering, designed to support the anti-aircraft guns which can be easily swung both horizontally and vertically, in order to keep enemy planes under fire, those planes flying over the city and unloading their deadly load everywhere of bombs. The cannon was mounted on a steel structure in the shape of a four-legged spider



Figure 11. Ruins of the Abbey of Santa Maria Novaluce.



Figure 12. Defensive structures on Monte Po connected by an underground passage.

and on the edge of the fort is still visible the housing for the anchor bolts that kept the metal structure well anchored to the concrete work underneath.

The artillerymen assigned to the piece were relatively sheltered inside the structure: some to hand out the ammunition, some to insert the projectiles into the cannon and some to shoot.

One of the two structures is connected, via a narrow and sinuous walkway, to a fort located lower down and equipped with a roof and two large splayed loopholes, facing the lower part of the hill. Its function was the typical one of checkpoints, i.e. that of opposing, using a machine gun or other easily wieldable light weapon, an attack conducted by land by enemy infantrymen coming from the part where the Garibaldi Hospital stands today.

There is also a tunnel approximately 40 meters long, accessible from both sides, which crosses the hill from side to side near its top, remaining well protected below it. Inside, on the side of it, there is a room that must have served as a warehouse. The particularly evocative tunnel can be explored with an electric torch.

CONSIDERATIONS ON THE SOCIAL ROLE OF THE PROPOSAL

by Giusi Milazzo, General Secretary of SUNIA-Sicily and Filippo Gravagno, Professor of Urban Planning Technique, University of Catania

The design idea of the *Monte Po-Acquicella Sub Urban Territorial Park*, a green infrastructure

of extraordinary environmental and urban value, has, together with others, a significant social value. In fact, the project also has among its objectives the mending of the separation between the urban “core” and the populous neighborhoods that arose on its edges between the 60s and 70s (Fig. 13).

The Park intends to present itself today as a place enjoyed by all, which borders and crosses numerous neighborhoods up to the sea, incorporating the mouth of the Acquicella. But it also intends to be a job opportunity in the environmental and social field for many girls and boys: in short, a park as a common good, a recreational, recreational and cultural place, in which the whole city recognizes itself and which it takes care of.

The large neighborhoods that arose on the edge of the urban “core” today host intensive settlements of public housing, crossed by waterways that are still visible in places, the widest of which is the Acquicella river. The highly anthropized landscape here is characterized by the significant presence of large uncultivated and abandoned green spaces today often used informally also for illicit activities. The characteristics of this landscape therefore inevitably bring to mind the description of Catania made by the Arab geographer Al Idrisi, at least for the part in which he describes Catania as a city crossed by singing streams and rivers that made the gardens lush and refreshed the hot summer days (Amari, 1982).

By the associations that worked to develop the idea, the park was conceived as an ideal weaving

of greenery and water to repair the gap and reduce the gaps between the city and its many suburbs. Cities and their suburbs see huge gaps that are not just physical. From the data published by the statistical service of the municipality of Catania in the V and VI municipalities within which the territory to be crossed by the Park falls, it emerges that 34% of the Catania population lives here with a very high percentage of the youth population. An important data which, when analyzed together with that of school dropout (between 19.4% and 22%), the lack of infrastructure and services and the very high unemployment rate of the under 30 population (38.5%), gives us a complex social context in which any intervention designed to be effective cannot fail to take into account the need to also influence the structural nodes of a marginality that continues to persist.

There is a trait that all the areas involved in the Park have in common and it is their marginality, already thought out and defined when the urban planning instruments drew the boundaries of the existing city and envisaged the areas of urban expansion to offer the opportunity to the working classes and less well-off to obtain a healthy home compared to the unhealthy ones of the old city. A project useful for other interventions, including speculative ones, in the built city. That initial choice is at the origin of the settlements of both Nesima and Monte Po but also of San Giorgio and Librino, which, even if built in different periods, were considered expansion areas of little value, where to allocate the public residential housing districts, determining a precise characterization.



Figure 13. “Sant’Agata Village”, one of the neighborhoods on the southern outskirts of Catania involved in the proposed suburban territorial park. Mount Etna in the background.

From a study carried out by students of the “Urban Planning Techniques and Urban Planning Techniques Laboratory (Department of Civil Engineering and Architecture of the University of Catania)” courses who carried out an in-depth study a few months ago, significant data emerge on the deficit of services. In summary, with a look at the social emergencies that the park project should address, it is possible to point out: physical and social marginality, deficit of educational and collective services, significant rate of school dropout and high rate of unemployment, especially among young people. Furthermore still urban and building degradation, housing overcrowding, poor presence of institutional facilities, lack of places and equipment, including physical ones, intended for aggregation and socialisation.

We have a disharmonious landscape where degradation alternates with large empty spaces, with the absence of essential infrastructures, where the lack of a large part of those service structures, public and private, indispensable for a complete and effective use of the neighborhood by of its own inhabitants make it an enormous container of population belonging to the weakest and most subordinate groups of the city and of the entire metropolitan territory.

But despite the heavy deficits, some strong points to work on cannot be overlooked as elements of extraordinary potential: the presence of many young people and at least in the most densely populated areas, the presence of strong neighborly relations. Just as it clearly emerges that in this context, educational institutions represent the public support on which to focus to stimulate positive sociality. This is precisely what happens in these frontier schools where teachers, managers and school staff follow the children day after day, many of whom have difficult histories, with the hope of being able to offer them a better present and future away from the streets and crime.

These neighborhoods experience the real risk of being limited to a description of them that only highlights their characteristics of degradation and danger, effectively branding them as difficult neighborhoods and therefore now irrecoverable. We are convinced that we need to go beyond the stereotype of the run-down neighbourhood, of which external observers often fall victim. The Municipality itself in the pages in which it describes some areas of the city is the creator of this stereotype, while it must

be evaluated through the eyes of participatory observation from within which has the inhabitants and the same associations that work in the neighborhoods as protagonists.

For this reason the park proposal was signed by associations and neighborhood committees that operate in the territories, and for this reason in the construction of this extraordinary green urban infrastructure which is the *Monte Po-Vallone Acquicella Sub Urban Territorial Park*. And for this same reason we reiterate the need for the population and communities concerned to be involved and participate through the creation of neighborhood workshops aimed at stimulating and making effective community participation in all phases of establishment, design, construction and management of the Park.

CONCLUSIONS

by Giuseppe Rannisi and Alfredo Petralia

The area of the proposed *Monte Po-Vallone Acquicella Sub-Urban Territorial Park* has a multiplicity of aspects, as can be seen from the several contributions presented, which make it particularly important. Millennia of history of the Catania territory are stratified in it, thanks to its strategic position along the road that connected the coast to the interior of Sicily. Artifacts have been found and there are testimonies back from the Bronze Age to the residential and burial settlements of the Roman age (also considering that it includes the remains of an ancient aqueduct) and later in the Middle Ages by a basilica, a fortification, and further east, near the Cemetery of Catania, by the abbey of Santa Maria di Nuovaluce, up to the last century with the presence of military defense systems of the Second World War placed both on the top of Mount Po and on the hill of Telegrafo Vecchio.

The presence of a perennial surface watercourse, the Acquicella, acts as a connecting element of the entire area, from the hill to the sea and stands as a privileged path, an element of connection between the different valuable habitats present and as a tool for the ecological redevelopment of the currently degraded areas. Among the most important environments, from a naturalistic point of view, there is the area of the river mouth with its coastal dunes as well as the watercourse itself, which have the important values that we would like to preserve.

The final stretch of the Acquicella Stream, including the mouth and the dune areas, according to the Lipu, the WWF Catania and the Sicilian Fauna associations, has the value of a Natura 2000 Site according to the European Habitats 92/43/EEC and Birds 2009/147/EC Directives.

Among the floristic-vegetational aspects, the studies conducted by Rosario E. Turrisi (unpublished data) reveal that on both the dunes around the river mouth that along the watercourse we find habitats mentioned in the Habitats Directive besides having some rareties. Among the amphibians there is the *Discoglossus* (*Discoglossus pictus*) and for invertebrates the protection of dune-mouthy environments could favour the resettlement of the Grilly Orthoptera *Brachytrupes megacephalus* (vulnerable species for the IUCN).

Present habitats and plant and animal species are protected by the Habitats Directive. From the faunal-ornithological point of view, the most important data is the nesting of the rare Kentish plover, *Anarhynchus alexandrinus*, which has disappeared from most of its range and is included in Annex 1 of the European Birds Directive 2009/147/EC and the presence of the Swamphen (*Porphyrio porphyrio*), nesting, which has recently settled there thanks to the quantity of cattail and the reeds present there, both species present in Annex 1.

Another strong point of the proposed Park is its social value. It would link several inhabited centers that now, paradoxically, are separated by this area that is not adequately managed, in which the occurrence of fires and waste littering put at risk the great value it represents. In fact, the area with its extension would join neighborhoods such as San Cristoforo, Via Acquicella Porto, Via Palermo, San Leone thanks to the insertion of the lava front of 1669 to neighborhoods completely isolated from the historical, commercial, residential touristic urban context such as San Giorgio, Stradale Cravone, Monte Po, without city services.

The most significant aspect that must be emphasized, however, is that this proposal was drawn up by a large group of associations operating in different fields, from the environment to the social, and is an example of participatory democracy as it comes from the bottom. It involves a plurality of inhabited centers located around the park, which will have to play a role in the management of the Park thanks to the involvement of the people who live in these villages.

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