## Architecture and building traditions in the territory of Cosenza:

## the 1910 Colonia Silana

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### Historical and environmental background and the Colonia Silana

Sir Ronald Ross, the British medical doctor who received the Nobel Prize for Medicine in 1902, discovered the malarial parasite in the anopheles mosquito and considered malaria as one of the most important diseases affecting humans, "probably the most important of human diseases" [1]. The histories of Southern Italy and malaria have been strongly interrelated, particularly in Calabria, whose peculiarities and contradictions, as well as the genesis of its population and the transformations of its territory, can be more easily understood only if the relationships with this tremendous plague are considered.

It can be said that today's Calabria originated in the eighteenth century, when the agrarian landscape greatly changed, and not at all for the better. It was during the second half of the century that the agrarian crisis led to the progressive deforestation in favour of arable land [2].

Hence the action of man went together with frequent natural catastrophes, like the many earthquakes that changed local orography, causing for example the progressive sinking of the Ionian coast and the consequent slowing down of flow at river mouths that, as in the Paestum plain and Pontine marshes – wrote Norman Douglas – favour the typical environmental conditions for malaria transmission [3]. Moreover, the recurring seismic events in 1783 created in the region more than two hundred lakes that, by drying up, caused a malaria epidemic that killed 18,000 people [4].

The studies of Francesco Genovese, a medical doctor who fought malaria in the early twentieth century and wrote an important essay on this disease in Calabria [5], report that already at the end of the seventeenth century, the entire coastal area was malarial and abandoned, and the environmental conditions got worse because of deforestation carried out in previous years [6]. As a matter of fact, farmlands cultivated with cereals in the few plain and hilly areas were no longer sufficient, so mountain areas had to be used, and deforestation first occurred along fringe areas. Later, forests were systematically and indiscriminately cut down. Hence, every time it rained, tilled soils, no longer held in place by plant roots, tended to slide down bare mountain slopes, carried by wild rivers and streams that inundated cultivated areas and blocked water flowing to the sea, thus creating wide marshlands, the ideal habitat for mosquitoes.

Hydrogeological instability was thus one of the main vehicles of malaria infection between the eighteenth and nineteenth centuries [7]. Paradoxically, as the mountain areas were no longer so isolated, the day labourers who moved towards valley and seaside areas for the harvest season in summer were the cause of malaria diffusion inland where a single diseased person, coming back home after the harvest, could infect a whole village as soon as environmental conditions were favourable to infection.

A decisive trend reversal occurred at the end of the nineteenth century when reforestation interventions were carried out. However, they were not sufficient to improve the environmental conditions. In fact, during the first decades of the twentieth century, large peninsular areas and islands in Italy, "for more than 6,000,000 hectares, with more than 200

settlements and a total population of 8,000,000 inhabitants, are hit by malaria" [8]. Only in the 1920-30s was the antimalaria fight at least seen as the main goal of agrarian reclamation activities, and lawmakers' attention was focused on drafting pertinent laws. In the 1922 Report the Rome Committee of the Lega Nazionale Contro la Malaria (the Italian Association Against Malaria) – founded in 1909 by Camillo Golgi and Guido Baccelli – reported that "on the one hand, Government action has been only concerned with the allocation of an insufficient amount of money ..., on the other, private enterprises, after being very involved, have now turned into negligence" [9].

While waiting for reclamation actions to be implemented, several medical doctors admirably worked hard to stop new family outbreaks and avoid impaired development and health consequences in children. Particular mention is owed to Bartolomeo Gosio, a renowned medical doctor who actively fought malaria. He promoted the construction of special areas where malaria children could be hosted during summer, thus distancing them from family outbreaks and healing them in environmentally natural conditions that would favour their physical recovery.

After the establishment of the Italian Association Against Malaria many provincial committees were founded in the concerned areas, whose action had also to focus on camp construction: "anti-malaria camps" were thus created. One of these camps, the Colonia Silana, was realized under the guidance of Bartolomeo Gosio and was opened on July 28th, 1910 by the Cosenza Committee, headed by Senator Francesco Mele. The settlement was created by Domenico Migliori, a Cosenza medical doctor, together with Angelo Cosco and Adolfo Tafuri, both from Cosenza [10].

The Cosenza Committee decided to place the camp in the Sila Plateau. A three-hectare area was donated by Cosenza municipality, located in the Federici district near Camigliatello, about 1300 m high, along the road connecting Cosenza to San Giovanni in Fiore, an important administrative centre of the Sila area. A beautiful natural landscape, a cool, non-humid climate, the balmy air of pine woods, a crystal-clear and generous water spring were the camp background. These fundamental characteristics made the place a very good choice and determined the success of the project that lasted about 70 years despite the many difficulties. The settlement developed around the first wooden frame house or pavilion, donated by the Ministry of Domestic Affairs and already employed to shelter the refugees of the 1908 earthquake that had devastated Reggio Calabria and Messina territories two years earlier. Giuseppina Le Maire, from Piedmont, was the tireless woman who, after meeting Gosio and Migliori, devoted all her life to the activities of the Colonia Silana. Remembered as "the friend of the lowly" [11], her undisputed organizational skills and humanitarian commitment were at the basis of the development and good management of the camp. She constantly promoted volunteering and important financial initiatives able to guarantee the survival of the Colonia, particularly at its difficult early stages.

The Colonia was the first new facility that was realized in Calabria after the earthquake and it soon became the first significant cultural centre of the Sila area thanks to the "presence and work of many people of outstanding cultural and humanitarian qualities" [12], capable of attracting the attention of prestigious people and benefactors that allowed the Colonia to develop constantly. In 1911, a year after the camp's opening, the Berlingieri pavilion, after the name of its benefactor, was built of wood, and in 1912 the Ginestra pavilion was erected after the project of engineer Barrese who also sponsored its construction. The building was made of wood, had two floors and the peculiar architectural characters of the Swiss building type called chalet. The pavilion became unstable and was demolished in 1948. The following year (1913) the first "emergency room", was built and opened to the local population. (Fig. 1)

Until 1930s, when the new central pavilion was built, the architectural features of the camp were strongly characterized by wood and very economic constructive techniques, due to limited funds and simple building programs deriving from donations and charity. Thus, very simple building procedures were employed by local workers with skills and equipment characteristic of the local building tradition. The firm run by Antonio Merando, and Pietro Serra and Antonio Arnone, the carpenters who, "under Merando's direction, worked with a kind of religious fervour (...)" [13] deserves to be mentioned.

During the First World War, between 1915 and 1918, the American pavilion was built with the contribution of the USA Red Cross, to be used as the new dormitory and refectory. The 84 m2 wooden one-floor construction had a good building quality, being still to this day a part of the camp's built heritage, though in need of restoration and functional adaptation. Close to the American building, there is the Veranda pavilion, also in need of restoration, that was originally used as a reception hall and later renovated to host the camp management. The 64 m2 building, that was originally made of wood and had one floor, has a mixed wood and masonry load-bearing structure.

1920 was an important year for the Colonia after the very difficult period following the war. In time, the camp had acquired importance, but, to give it an additional impulse, Le Maire involved in the enterprise the Industrialist's Foundation for War Orphans, the Opera Carnegie and the Association for Southern Italy interests [14], that granted the Colonia a regular annual allowance. The construction of the Veranda, together with the realization of an infirmary, a great hall for recreational and amusement purposes and the restoration of the central pavilion with newly panelled outer walls were among the results of the new management that would last for years. (Fig. 2)

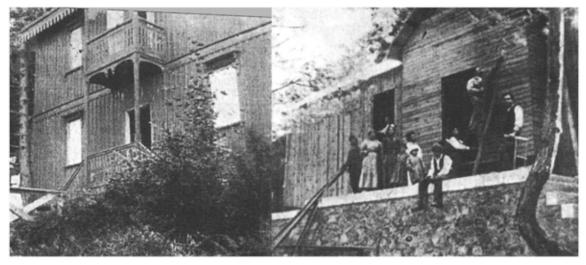


Figure 1: The Ginestra Pavilion (1912) and the Americano Pavilion (1915-18)

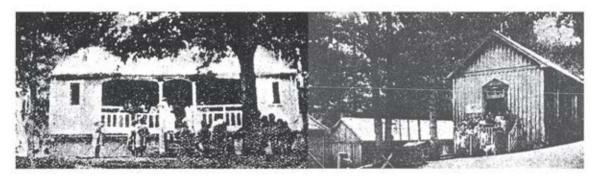


Figure 2: The Veranda Pavilion (1920) and other pavilions (later years)

In 1921 new works included two small bridges built on the streams that crossed the settlement, retaining walls, toilets (made of masonry) and the so-called Bath pavilion, a quite small wooden building equipped with bathrooms and showers. In the same year Cosenza Provincial Authority funded the realization of a new emergency pavilion that replaced the old 1913 construction. During this very satisfying development period, a wooden chapel was built in 1926, and its architectural and building characters still makes it the symbol of the first important period of the Colonia Silana. The chapel was enlarged at the end of 1930s and completed with a bell tower that still keeps the bell donated by Giuseppina Le Maire. Its construction marks the passage to a new managerial period in 1927, when the camp administration was entrusted by the Cosenza Prefect to Tommaso Arnoni, the active and competent podestà of the town, who was appointed Commissioner for the special management of the Colonia Silana. However, Giuseppina Le Maire continued to be "the leading figure of the Institution management – writes Peppino Via – thanks to her charisma and personality, till 1933 …"

#### The buildings of the Colonia Silana

Following the first important action of the government-appointed management, the Colonia became a charitable institution (R. D. 19 May 1930, n. 789): Government granted an extra-ordinary allowance together with the ordinary one, and appointed Arnoni as Government Commissioner. The new government management, having bigger funds, soon built the new large central building that replaced the old original pavilion and the related constructions that were no longer complying with hygiene and structural security requirements. The new building was realized by the construction company Parrini-Landini & C. that completed the work in 1930. The two company partners were also involved in the project as donors, as they donated a substantial sum and renounced to the final accrued credits, as required by the Commissioner. Their contribution allowed the accomplishment of the building program, including the realization of a new medical clinic with an isolation room on the site where the old emergency pavilion stood.

These are the years when Tommaso Arnoni's commitment made Cosenza, in whose province the Colonia is located, one of the most interesting towns in the national cultural landscape, for its modern urban structure and the quality of its architectural heritage that included both public and private residential construction [16]. This was the cultural context in which the Colonia Silana was enriched with new buildings and developed considerably. In 1931, in addition to the new buildings, the aqueduct project for the Colonia, designed by Tommaso Gualano, the head engineer of Cosenza municipality and the author of several public works in the town, was approved and realized for collecting the spring waters of Mount Curcio.

The L-shaped central building rises in the most elevated open space of the settlement. The building has a large semicircular flight of steps, and its dominant position is highlighted by the slender turret that is the central avant-corps at the top of the access stairs that narrow towards the end to fit to the geometry of the main entrance. It stands between two neoclassical columns supporting a balustrade where there is an opening in line with the entrance. The entrance is an arched portal, an element that is harmoniously repeated in the window series at the ground floor. The turret elevation is one-floor higher than the building's wings and has a balustraded open gallery on top with slender arched openings. (Figs 3-4)

The building façade is thus divided into three parts, each with an overhanging roof on top that covers the decorated upper wall band. The façade has large windows on axis with those at the ground floor, formally connected by a moulding that stops at the sides of the turret where the avant-corps corners, the central rose window and the Colonia sign decorate the façade. The building is completed by a block orthogonally located on the north front where a steel fire escape stands. During the early setting-up stage, a crane was mounted in this area to lift up the heavy boilers for the kitchen. The morphological configuration of the building structure at the end of the Southern section is architectonically interesting: here the one-floor building plan view shows rounded edges that generates uninterrupted curved walls on the side façade where the solids and voids effect created by the windows, perfectly in line with the architectural features of the period, is very effective. This formal appearace is enhanced by the contrast with the traditional elements of mountain houses,

strongly characterized by the technological and functional role of some building features that inevitably become elements that morphologically connote the buildings, such as sloping roofs with dormers and overhanging pitches. A culturally interesting design concept characterizes also the medical clinic building that, besides the vernacular typology due to the specific environmental context, goes beyond classicistic architecture, as it occurred during 1930s.



Figure 3: The main building, façade and a detail (photo by Alfonso Morelli - Team Mistery Hunters)

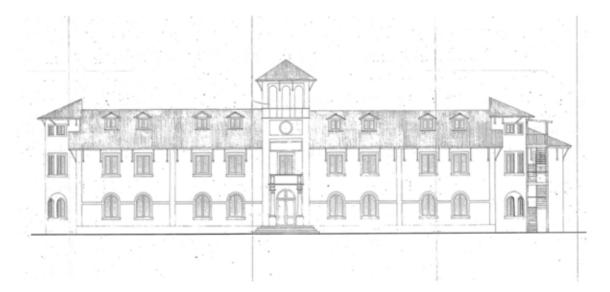


Figure 4: The main building façade (survey by Studio Eng. G. Scarnati)

With reference to the main central building, the analysis of the masonry structures confirms the use of stone masonry that is a typical construction element of the area in that period. The stones employed came from the quarries present in the regional territory. Quality stones include pink and white-yellow limestones from Mendicino; quarz-diorites from Palmi, Seminara and Bagnara; granites from Serra San Bruno and San Giovanni in Fiore. Stones are both employed as building and finishing materials, in the form of polished, raw or semi-finished blocks. Some elevated parts of the building structure are composite masonry with double courses of stones and solid bricks (every 50 cm) to level uneven rubbles and obtain a better masonry load distribution.

Bricks are employed in cornices and opening casings completed with a thick wooden plank as a lintel. Wooden lintels were used to place window frames that were fixed to the plank or inserted between two ad hoc planks forming a suitable space. Casement windows, generally made of chestnut or pine wood, have shutters directly fastened to the wall, flush with the external wall, with opening framings acting as rabbets. Exterior render finish with a low cement content simulates a large ashlar socle on the façade and a solid brick pattern on the remaining wall.

The originally wooden floor boards were replaced in time, so that different and alternative techniques coexist in the same building. Wooden floors, mainly of pine wood, consist of plain wooden beams with a circular cross-section and an irregular planking covered with a screed of aggregate materials, sometimes with the addition of a gypsum-based mixture to be used as a floor, or finished with cotto or cement tiles. In larger floor slabs, the beams, placed across the shorter span, are supported by inserting one or two thicker cross beams at the intrados. Replacement works mainly consisted in the use of mixed iron bars and hollow bricks, and hollow clay blocks in more recent interventions.

In masonry buildings, the roof has a supporting structure with cross partition walls and ridge beams spanning from gable to gable that do not thrust on the outer walls. Roof coating consists of boards nailed to the beams covered with corrugated iron. The dormers are framed structures connected to the cover boarding with wooden pitches and walls, and a fixed framed window that completes the front structure.

No new wooden constructions were built, so, apart from the load-bearing masonry buildings of the 1930s and minor constructions realized after the Second World War, the settlement's built heritage today consists of the original pavilions that need restoration and functional adaptation. They attest the important building production in the settlement and the technical skills employed by local workers in wood construction. (Figs 5-8)

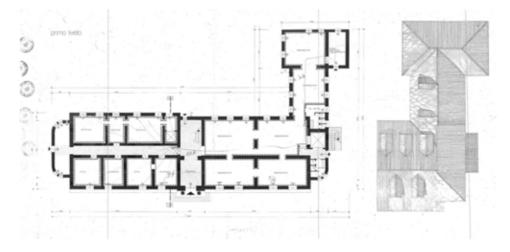


Figure 5: The main building, ground floor plan and roof plan details (survey by Studio Eng. G. Scarnati)



Figure 6: The main building, southern façade and window details (photo by Alfonso Morelli - Team Mistery Hunters)



Figure 7: The main building, overhanging roof details (photo by Alfonso Morelli - Team Mistery Hunters)

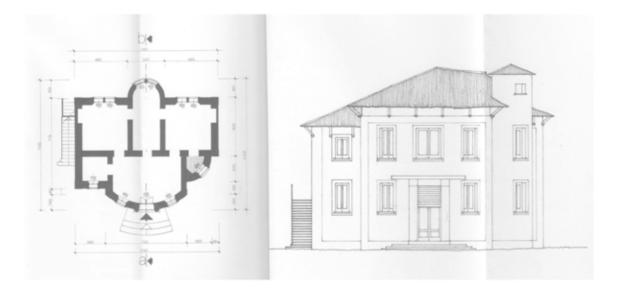


Figure 8: The medical clinic, ground floor plan and main façade (survey by Studio Eng. G. Scarnati)

Wooden pavilions are load-bearing wall buildings consisting of simple framed structures also called cavity walls, with a linear framework and wooden infill walls. The wall is made of 8 cm thick vertical posts connected at the upper and lower ends by horizontal stringers that complete the framework.

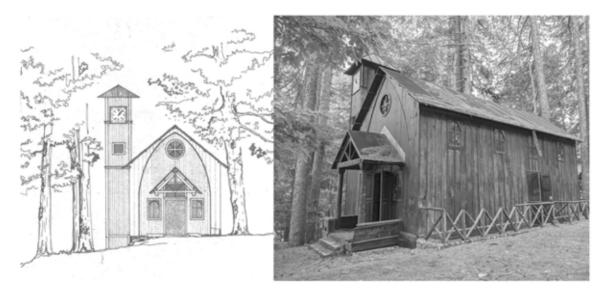
The rectangular posts double near the truss supports with the longer side placed orthogonally to the wall. At window and door openings, located between two posts, the framework is completed by intermediate horizontal stringers and lintels. A 2-cm thick planking coats the framework structure on both sides; the planking is horizontally mounted on posts and forms a 12-cm cavity wall. The wall is completed with external coating planks vertically arranged side by side and finished by profiles. Internal coating planks have vertical slots and are tongued and grooved.

The walls are not directly placed on the stone masonry foundation walls, but on wooden beam bearings fixed on them. Beam bearings are connected to the lower stringer through post portions laid at a constant distance.

Beam bearings also support the base floor consisting of pine wooden beams on which the planking (2-cm thick fir wooden planks joined together) is nailed. The floor is separated from the soil by a large air chamber so that the direct contact between wood and soil, that would trigger degradation phenomena due to raising damp, is avoided.

Wall openings and windows are generally flush with the internal wall, they have wooden plank casing nailed to wall posts; window sills consist of a board having the same thickness as the planks, 5-6 cm protruding from the wall, and a board nailed beneath as a drip. Windows are completed by an exterior trim around head and jambs and panel shutters opening outward.

The roof load-bearing structure consists in simple trusses formed by two jack rafters with no king post, connected below by beams acting as tie bars that support the attic plank floor. No purlin connects the trusses, so the roof is covered by nailing planks directly to the extrados of truss rafters and covering them with corrugated iron. In the hip-roofed pavilions, cross beams originating from end trusses are laid on the corners and give the roof its typical shape. Church construction is based on the same system as pavilions, except for its bell tower, whose bearing structure consists of four solid pillars at the corners, connected together by horizontal beams that form a sort of stringcourse at different levels. The outer walls are made of 2-cm thick planks, mounted only on the outer wall. In the middle of the inner bell-tower room, a fifth wooden pillar is the newel of a wooden spiral staircase. The church was restored and interventions involved both masonry foundations and the wooden structure. (Figs 9-10)



*Figure 9: Church, main façade and side view (survey by Studio Eng. G. Scarnati; photo by Alfonso Morelli - Team Mistery Hunters)* 



Figure 10: Existing pavilions, façades and sections (survey by Studio Eng. G. Scarnati)

During 1930s, the Colonia developed and became more efficient: apart from the new functional buildings that were erected, the camp was provided with an aqueduct, a central radiator heating plant, the only example in the Sila plateau, and an independent electric power plant. These elements aroused national attention on the Colonia's activities. In 1936, a radio broadcast was dedicated to the Colonia Silana, as reported by the newspaper Cronaca di Calabria, while a group of reporters visited it in 1938, triggering media interest in the place. Consequently, the Colonia became a "permanent camp" (not only a summer facility), and in that same year the management was entrusted to Cosenza GIL (Gioventù italiana del littorio), the Italian fascist youth association [17].

During the reconstruction years following the Second World War, the Colonia activities were reorganized and pavilions refurbished, new small buildings were constructed, facilities, including sanitary ones, were upgraded, the external staircase and the park were restored.

In 1950-60s, new interventions were focused on the functional adaptation of old and new building interiors that had to meet new housing, administrative and didactic needs. Different commissioners and the National Association for Southern Italy Interests, headed by Ivanoe Bonomi, that had already been involved in the institution, were in charge of the Colonia management. During the last decades of the twentieth century, the settlement was directly run by Spezzano-della-Sila municipality, then Calabria region, until it was finally abandoned.

#### Conclusions

This study is part of a research project aimed at gaining a deeper knowledge of the architectural and construction features of the Italian building heritage in the twentieth century. In that period, materials, building techniques, and detail solutions played a very important role and defined building quality and their architectural identity. The study of significant settlements, such as the Colonia Silana, can contribute to acknowledge their value, revive their cultural role and supply the guidelines for their correct restoration and redevelopment.

In particular, the Colonia Silana bears witness to an important experience that involved both public health and technical and building aspects, and developed in the course of 70 years in very difficult economic and environmental conditions characterising the area. It is evidence of an interesting built heritage evolution in the area, today abandoned and in need for urgent interventions and functional adaptation, mainly because it represents the emblematic and significant expression of a condition which is unfortunately very common in Southern Italy.

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