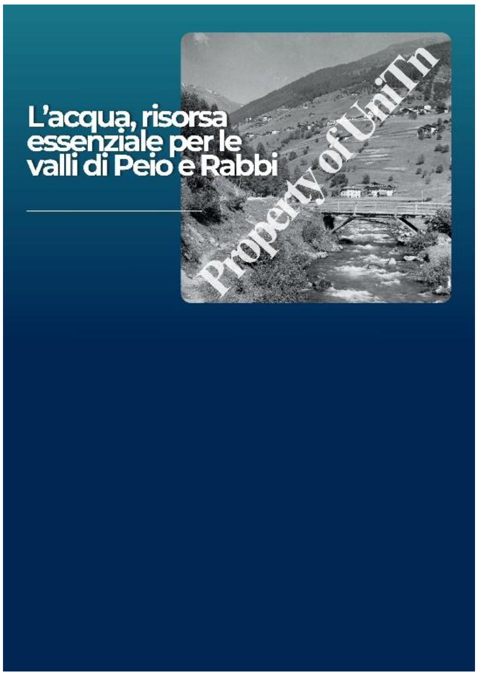
Water: an essential resource for the valleys of Peio and Rabbi



Since 1935, the valleys of Peio and Rabbi have been an integral part of Stelvio National Park. They have always been defined by a deep and inseparable bond with water. The presence of numerous streams along the two valleys - most notably the Noce and Rabbies torrents - sustained the growth of local society and economy. As early as the Middle Ages, waterpower was skilfully harnessed to operate mills, sawmills, and small forges, all of which were essential to the agro-silvo-pastoral activities that formed the backbone of productive life. From the torrents branched numerous artificial channels - known as *lec* - also used to irrigate meadows and vegetable gardens in the valley floor. Between the 18th and 19th centuries, the main crops in order of importance included rye, barley, wheat, broad beans, chickpeas, and peas. Among industrial plants, hemp deserves mention, though flax was especially significant. Potatoes, initially met with distrust by the valley inhabitants, became widespread in the early decades of the 19th century. Where the steep slopes prevented natural irrigation of the meadows, the meticulous labour of peasant women made the difference. Using a special type of spade, known locally as *marra*, they manually diverted water from the artificial channels to the fields, ensuring irrigation «*where the grass sprouts and grows thick and luxuriant in these meadows, rewarding with great profit the tender care and well-spent toil*» (Perini 1842, p. 178). This demanding summer task enabled the inhabitants of Peio and Rabbi to achieve at least two hay harvests by St. Michael's Day (29 September). Fodder was in fact the indispensable basis of winter cattle feed. In short, one might say: there could be no livestock without hay, and no hay without water.

Le Valli d'Annone e Sole

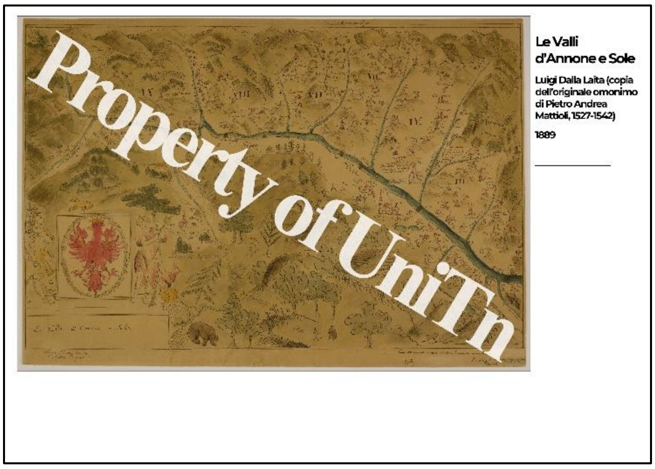
Luigi Dalla Laita (copy of the homonymous original by Pietro Andrea Mattioli, 1527–1542)

1889

Estate inventory map - Cabreo

Coloured pen drawing

Scale approx. 1:65,000



In this map, a faithful copy of the 16th-century original created by the physician Pietro Andrea Mattioli, the Non (*Annone*) and Sole valleys are depicted, together with their side valleys, including Peio and Rabbi, each shaped by the erosive action of watercourses. The work, among the oldest known representations of the southern Tyrol - distinguished by the eagle coat of arms in the lower left corner - lacks both an explanatory legend and a cartographic scale. Despite some inaccuracies in proportion and perspective, the map reveals a detailed knowledge of the territory. The intention to emphasise naturalistic features (flora and fauna), geomorphological elements (mountains, rivers), and human interventions (buildings, bridges, mines) is clear, as are explicit references to local history. Mattioli, serving Cardinal Bernardo Clesio, produced this *carta gentilizia* to graphically represent the extent and value of his patron's territorial possessions.

***Atlas Tyrolensis* (detail)**

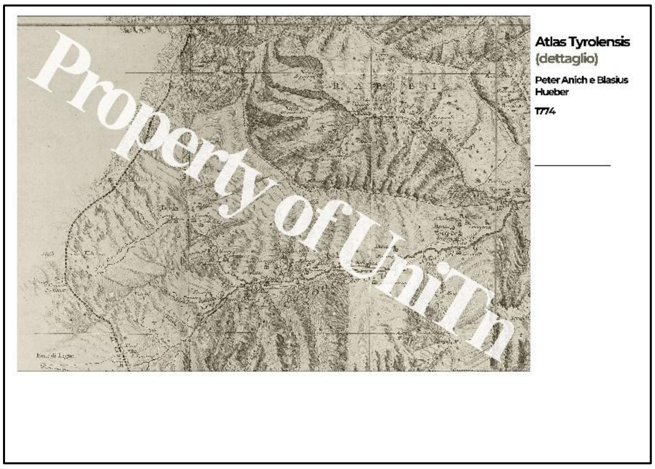
Peter Anich e Blasius Hueber

1774

Topographic map

Copperplate engraving

Scale approx. 1:103,800



The *Atlas Tyrolensis* represents the first cartographic depiction of the entire County of Tyrol (approximately 26,000 km²), produced during the reign of Maria Theresa on the initiative of the Jesuit Ignaz Weinhart. Owing to its large format, the work is divided into twenty sheets, assembled into a composite overview, and is characterised by graphic elements typical of modern technical cartography: grid, frame, scale, and legend. While certain features are represented with exceptional accuracy for the period (lakes, rivers, glaciers, alpine huts, military structures), others are depicted in a more schematic manner (forests, reliefs). In the detail shown here, the extent of the Peio and Rabbi valleys can be observed, with numerous toponyms of the most representative places in the area. In the Rabbi valley, in particular, some names stand out as references to socio-economic activities: *alla Sega, Acidole di Rabbi, Malga di pegore.*

Meadows, pastures, and transhumance in the valleys

At high altitude, beyond the forest belts dominated by spruces and larches, lay the collective pastures. Unlike the vegetable gardens and meadows of the valley floor, these were neither irrigated nor mown, but used from June to September for cattle and sheep summer grazing. Around the alpine dairies, water sources and small ponds were always present - indispensable both for watering livestock and for the life and work of the herdsmen and dairy staff (*vachiari, malghelin, giant della malga, giant della stalla*). According to an archival record from 1811, the alpine dairies of the Rabbi valley hosted 1,052 cows, 132 pigs, 3,533 sheep and goats, and 18 horses (ACR, b. A1.3-4). About half a century later (1869), Julius Payer estimated in the Peio valley a stock of 1,000 cattle, 450 sheep, and 150 pigs. A document from 1882 reported: «*these mountains are always filled with livestock from spring to autumn, and in the months of July, August, and September the animals are gathered into separate herds led by chosen shepherds, so that family members may be free for agricultural work, and so that heavier livestock may be assigned to more convenient and less dangerous pastures*» (ASPT, Comune di Peio, b. 75, f. 8). Among the most important water resources within the boundaries of the National Park are, in the Peio area, the Lungo, Nero, Marmotte, Lama, Cóvel, Lagostèl, and Vallombrina lakes; while in the Rabbi valley the Sternai ponds and the Valletta and Corvo lakes. Glaciers too, despite having retreated by the late 19th century «*to the point that the morainic area left bare was already covered with turf, so that sheep were now grazing there*» (Stoppani 1894, p. 497), contained an enormous reserve of water. During the summer months, the Noce Nero and Noce Bianco torrents are respectively fed by the perennial snowfields of Corno dei Tre Signori and the Vedretta Rossa at over 3,300 m a.s.l. The Rabbies stream, in turn, originates from the glacial ponds of Cima Sternai at 2,600 m a.s.l.

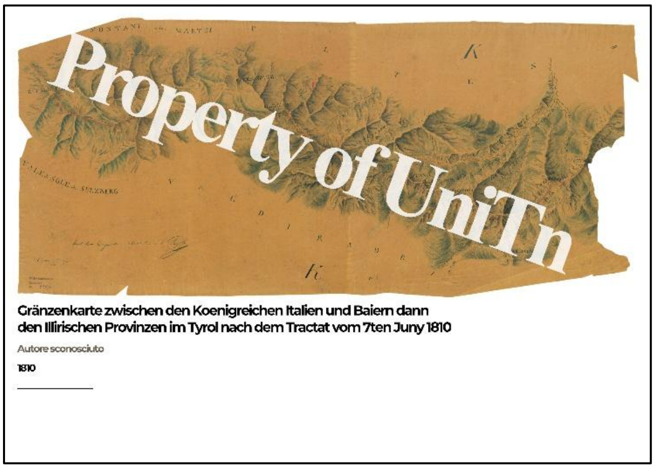
Gränzenkarte zwischen den Koenigreichen Italien und Baiern dann den Illirischen Provinzen im Tyrol nach dem Tractat vom 7ten Juny 1810

Unknown author

1810

Boundary map

Scale 1:25,750



In this depiction, the first of the nine sheets composing the work, the westernmost section of the border between the Napoleonic Kingdom of Italy and the Kingdom of Bavaria on 7 June 1810 is shown. In Trentino, a historically liminal territory, the question of borders is a particularly prominent theme in cartography, given the frequent redefinition of state and frontier arrangements, especially during the Napoleonic era. The line highlighted in pink follows the watershed crossing the mountain range from the Cevedale Glacier (*Zufall*), passing Cima Collecchio (*Gleck*) and continuing towards Passo Rabbi. Considering the current extent of the glacial tongues, it is evident that in 1810 the surface of the *Zufall Ferner* (Cevedale Glacier) was so vast that it reached the western slope of Cima Sternai, almost touching Cima Collecchio.

Valli di Non e Sole nel Trentino anticamente Naunia Parte della Rezia

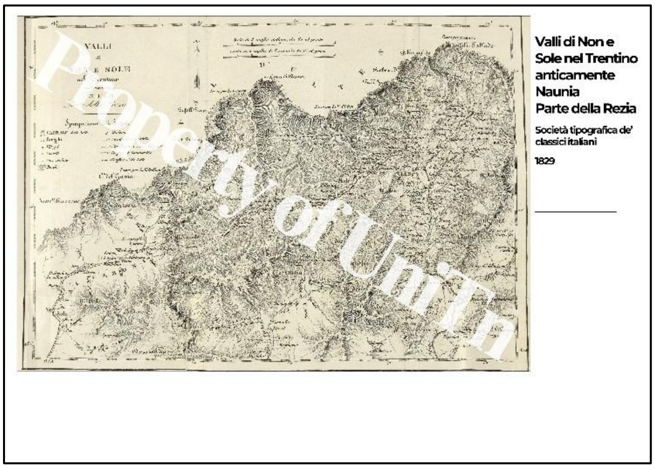
Società tipografica de' classici italiani

1829

Topographic map

Copperplate engraving

Scale approx. 1:205,000



The map, printed in the volume *Periodi Istorici e topografia delle Valli di Non e Sole nel Trentino meridionale* by Jacopo Antonio Maffei (1829), provides a detailed representation of communication routes, watercourses, and both external and internal valley boundaries. The elements that immediately draw the viewer's attention are the hachuring of the reliefs and the shading of the valley floors, which clearly highlight the shape of the main and side valleys. Notably, unlike other maps on display here, the legend distinguishes clearly the forests distributed across the area. A dense concentration of toponyms enriches the depiction, which is framed by a border including scale bars and coordinates. The size of settlements is appropriately indicated according to the importance of the locality: *capitale delle valli, borghi, villaggi, case isolate.*

Alpine exploration in the 19th century

During the 19th century, several mountaineers conquered the peaks of the Ortles-Cevedale group. As early as 1804, Josef Pichler reached the 3,905-meter summit of Ortles, the highest mountain in Trentino-Alto Adige/Südtirol. Fifty years later, Cristoforo Groaz became the first to climb Mount Vioz. In 1864, the British alpinist Francis Fox Tuckett reached the summit of Gran Zebrù. The following year, Tuckett, together with his compatriot Douglas W. Freshfield, completed the first ascent of Punta San Matteo. Also in 1865, Julius Payer - perhaps the personality who left us one of the most evocative accounts of the Peio and Rabbi territory - conquered Mount Cevedale. Describing the erosive action of water flowing from the Careser Glacier into the Val de La Mare (Peio), he spoke of streams that «*widen into small lakes and, after emerging, cascade down a series of waterfalls to reach the high rocky terraces of the main valley, forming an extraordinarily complex section of the mountain [...] very aptly called "Le Lame"*» (Mazzocchi 2017, p. 259). According to some etymological interpretations, the toponym *lama* may indicate a wet area, common in the seasonal floodplains of rivers. In the following years, mountaineering evolved from an individual pursuit into a social phenomenon. In 1872, the Società Alpinistica Trentina was founded in Madonna di Campiglio for the exploration of the Sole, Peio, and Rabbi valleys, and the first mountain huts were built in the area. In 1882, the Rifugio Cevedale was constructed in Val de la Mare at 2,710 m a.s.l., dedicated to Senator Guido Larcher, providing access to Cima Venezia, Palon de la Mare, and Zufallütt. In 1903, Rifugio Dorigoni was built in Val Saènt at 2,430 m a.s.l., serving as the starting point for ascents to Cima Sternai. Finally, in 1906, Rifugio Mantova was established at Crozi del Taviela, at 3,050 m a.s.l., for climbs to Taviela, Punta Peio, Rocca Santa Caterina, and San Matteo.

Originalkarte der südlichen Ortler-Alpen

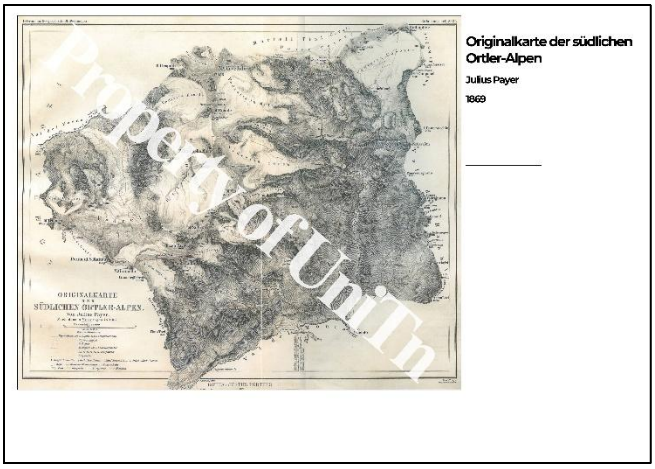
Julius Payer

1869

Topographic map

Lithograph

Scale 1:56,000



The explorer and mountaineer Julius Payer produced a faithful topography of the Ortles-Cevedale group, which he climbed and described in his travel diaries. This map meticulously depicts numerous features: the coordinates of the Vioz meridian, the routes undertaken with his trusted guide Johann Pinggera, the detailed rendering of the reliefs through hachuring, and the local toponymy. Some of the most significant hydronyms included by the author are: *Acidule di Pejo*, *Cima Vallon delle Acque*, *Lago Lungo*, *Noce (Nos)*, as well as the numerous *vedrette*, or glacial tongues.

Karte der centralen Ortler Gruppe

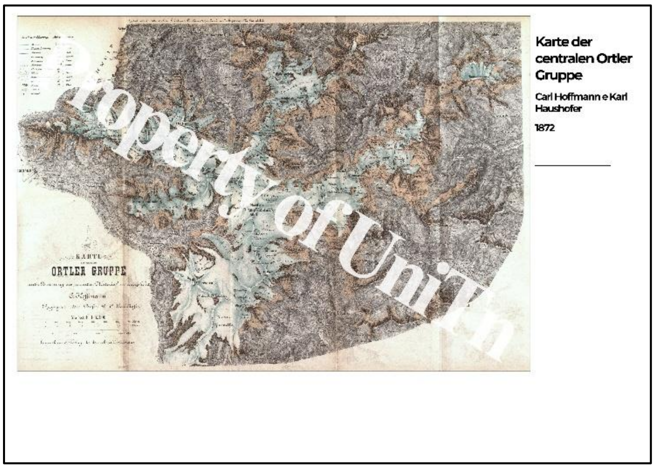
Carl Hoffmann and Karl Haushofer

1872

Topographic map

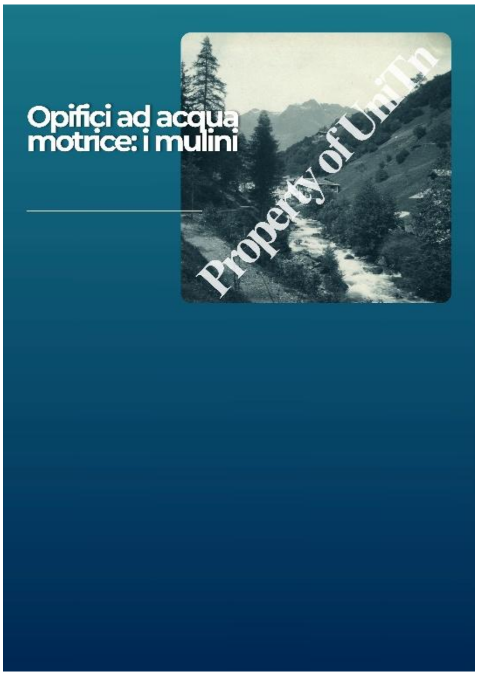
Litograph

Scale 1:72,000



The hachuring technique, used to define the relief, provides a fairly detailed view of the valleys in the central Ortles massif. The different colourings allow an easy recognition of the glaciers’ extent in 1872. This topographic map is still used today in some glaciological studies to analyse the local effects of the current phase of climate change. The information it contains therefore attests to its representational accuracy, thanks also to the meticulous local toponymy. The Peio and Rabbi valleys are partially shown in the southern area of the map, enriched with numerous place names, particularly those of the main peaks, whose elevations are reported with precision. The legend distinguishes the various elements included, such as communication routes, meadows, pastures, forests, bathing spots, and main settlements.

Water-powered workshops: the mills



During the modern era, the waters of the Noce and Rabbies rivers saw an increasing number of mills along their banks. In addition to grinding local produce, they processed grains that valley inhabitants brought in exchange for butter, cheese, pigs, calves, and kids. Based on these records, it is likely that many residents from the nearby Val di Sole traveled to Peio and Rabbi to grind their harvest into flour. According to Giuseppe Gabrielli, up to seven mills operated in the Peio valley between the 18th and 19th centuries. Alberto Mosca reports that in 1789, in Rabbi - where the turbulent waters of the stream offered ideal conditions - there were as many as eighteen millstones. That same year, a devastating flood destroyed much of the milling infrastructure along the banks of the Rabbies. Following this event, the milling industry in Rabbi never fully recovered, reaching a maximum of eight mills. Mosca also identified the owners and locations of the mills in the 19th century: the Zanella family at the Poja bridge; the Ruatti family at Oltem; the Cicolini family at Pracorno; the Zanon family at San Bernardo; the Dal Pez family at Casna; the Mengon family at Val; the Dal Pez family at Peter; and the Molignoni family at Seghe. In the Rabbi valley, in 1859, the *Protocollo delle particelle degli edifici* recorded ten mills, while in the Peio valley there were four: in Comasine, Celentino, and two in Cogolo. The operation of these machines was extremely ingenious and complex. Water, channeled from the stream via an artificial canal, flowed into a settling basin. From there, it ran along a chute that powered a water wheel, which in turn drove two large stacked stones: the stationary millstone and the rotating millstone. The hopper, a wooden funnel-shaped container, released the grain between the stones in a controlled manner, aided by vibrations produced during milling.

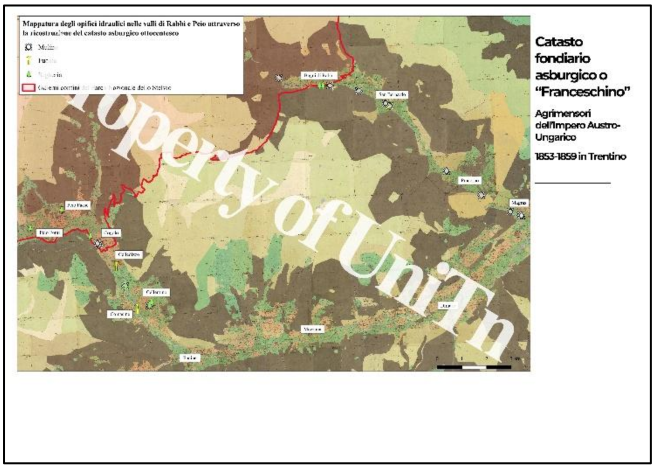
Austrian land cadastre, or “Franceschino” cadastre

Surveyors of the Austro-Hungarian Empire

1853–1859 in Trentino

Composite of cadastral sheets

Scale 1:2,880



This cartographic work results from a *merge* of the Austrian cadastral maps (known as “Franceschine”) produced for the Trentino territory in the mid-19th century. Both geometric and parcel-based, it was commissioned by Francis I to standardise property tax assessments. The accuracy and fairness of calculating the land’s taxable value considered both quantitative aspects, such as the area of the property, and qualitative/potential aspects, for example whether the land was vineyard or pasture. After the parcels were delineated through a process of verification and agreement, topographic surveying was carried out. The maps were then produced for each cadastral municipality. The unit of measurement used was the Wiener *pertica*, and the main scales of representation were 1:2,880 and 1:1,440. Thanks to colours, conventional signs, and symbols listed in the *Zeichemuster* (legend attached to the maps), it is possible to identify the intended use of buildings and distinguish workshops such as mills, sawmills, and forges.

Mühle für Francesco Dalatore in Celentino

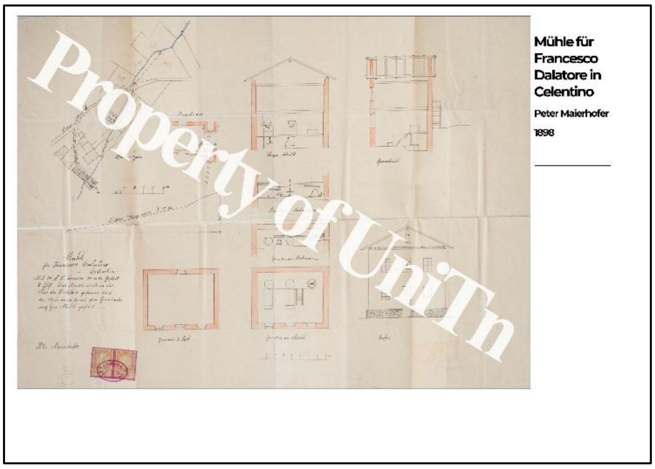
Peter Maierhofer

1898

Building plan

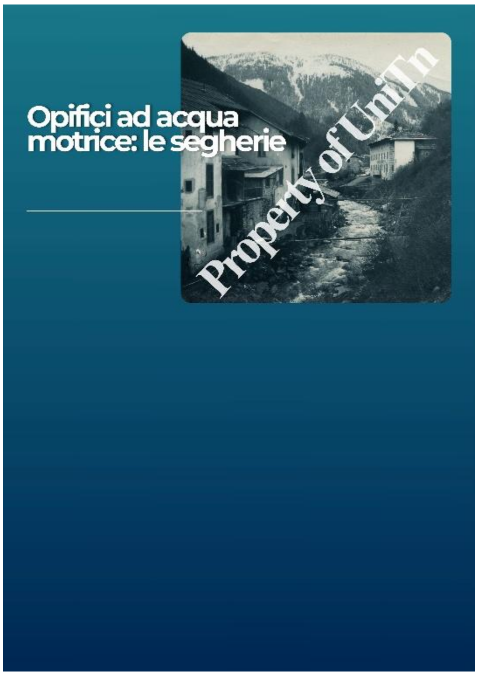
Coloured pen drawing

Scales: 1:100 for sections, 1:500 for cadastral base



The project illustrates, in plan view, the sections and profiles of a proposed mill in Celentino, Val di Peio. Beyond the building's façade and its possible location within the cadastral area, the striking feature is the depiction of the mill's internal mechanism: the turbine or water wheel, located on the ground floor, drives a mechanical shaft which, through belts and gears, transmits motion to the millstones. These are positioned on the upper floor and arranged one above the other: the stationary millstone below and the rotating millstone above, which grinds the grain. Above the millstones is the hopper, from which the material to be crushed descends.

Meadows, pastures, and water-powered workshops: the sawmills



Alongside mills, sawmills were the main water-powered workshops in the valleys, capable of producing construction timber using waterpower. After livestock farming, the commercial exploitation of forests was the primary source of income for the inhabitants of Peio and Rabbi. The system of forest management was quite complex and varied between the two valleys, reflecting the different historical developments that shaped the territories. While the ancient communities of Celentino, Comasine, Celledizzo, Cogolo, and Peio gained substantial autonomy from the Prince-Bishop in the modern era - being able to draft their own statutes, the so-called *Carte di Regola*, as in Peio in 1522 - Rabbi remained a possession of the Thun counts from 1492 to 1800. In the Peio valley, each village had established its own *Regola*: a representative assembly of citizens that collectively managed local resources. Each family was assigned a portion of forest within communal property, according to criteria established by the *Regola*. With the establishment of the modern municipality after the Napoleonic period (around 1820), communal properties were transferred to the municipal administrations of the Peio valley. The situation in the Rabbi valley was different. Part of the forests was progressively sold by the Thun family to the numerous communities of Val di Sole. Another portion was acquired by the *Consortele*: associations with a strong territorial base that still manage collectively the pastures and forests of Rabbi today. The cadastral land registry records six sawmills in the Peio valley and two in the Rabbi valley in 1859. It is likely that wood-processing activities changed by the end of the 19th century, as Mauro Agnoletti reports that in Peio two sawmills were active - in Forno and Sega - while in the Rabbi valley there were as many as five: in Masnovo, Molin, Sega dei Begoi, Seghe di Pracorno, and Fonti.

No title

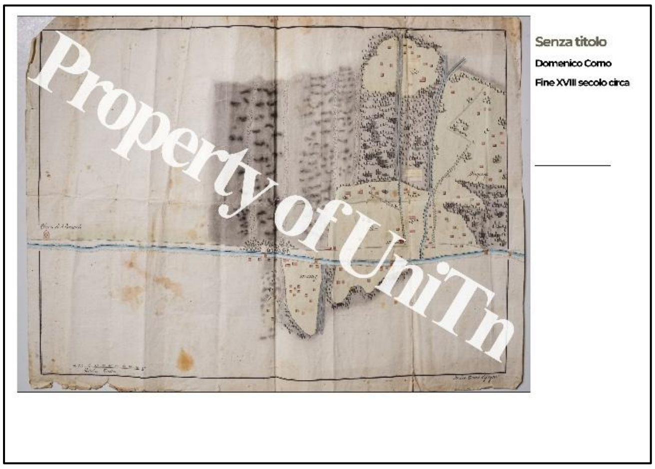
Domenico Corno

End of 18th century approx.

Topographic map

Watercolour

Scale in Trentine *pertiche*



The area depicted is located near Pracorno, along the banks of the Rabbies. In this locality, and more specifically at Seghe di Pracorno, a so-called “Venetian” sawmill - i.e., water-powered - was situated. The colours used on the map allow a clear distinction between watercourses (light blue), forests (grey), meadows (light green), and buildings (pink). Among the latter, the Church of Santa Maria stands out, as well as, at the far northwest, the Church of San Bernardo. The small valleys and tributaries of the Rabbies are clearly visible, as are the structures built as bridges across the stream - six of them appear in this depiction. The map shows significant damage, likely caused by fluid contamination.

Segheria idraulica di Bricketi Enrico

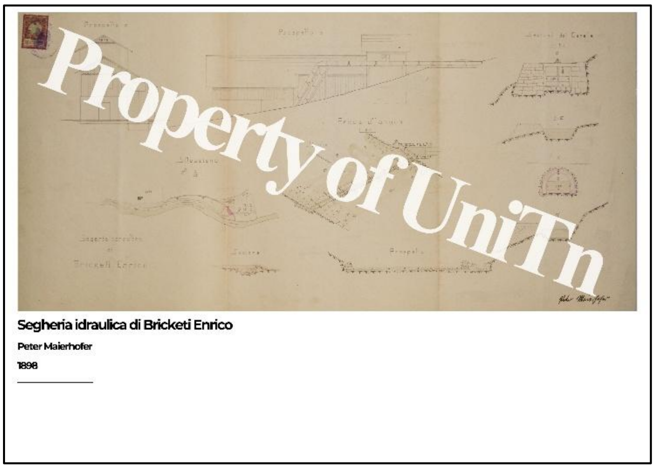
Peter Maierhofer

1898

Plans, elevations, and sections

Pen drawing

Scales: 1:200 for the plan, 1:50 for the sections



The document depicts the technical project of a hydraulic sawmill, owned by Enrico Bricketi, to be built on the Noce stream near Celentino. The drawing includes several technical details: elevations of the building (front and side), showing the typical architecture of Alpine industrial facilities, with masonry walls and a pitched roof; plan and section of the water intake (scale 1:200), illustrating the system for diverting water from the stream; layout of the diversion channel; and sections of the channel (scale 1:50), showing different types of lining (open trapezoidal, semicircular masonry vault, or natural slope) and dimensions. Water diversion involved morphological modifications to the terrain, regulated through precise authorisations and project plans, as evidenced by the engineer's signature and the presence of the fiscal seal.

Water supply network and aqueducts

In addition to artificial channels, aqueducts were highly important structures. Between the late 18th and early 19th centuries, pipelines were recorded carrying water from mountain streams to villages, as well as to meadows and gardens. In 1805, for example, the Riacci aqueduct was built: a conduit designed to irrigate the meadows of Frattaperta, Veneri, and Bugnol, near Cogolo. In 1839, a similar project was proposed by Domenico Gionta to the Community of Comasine, aiming to divert water from the Ponalle stream to the Prati di Barateri. Ten years later, Bonaventura Migazzi suggested drawing water from the Vallenaia stream to irrigate the meadows of Artesina, between Cogolo and Peio. According to Migazzi, the project could generate about 1,000 florins in ten years. These early systems consisted of wooden pipes or channels, highly exposed to weather and the erosive, destructive action of water. It was only in the late 19th century that more complex systems were built to supply running water to villages, using iron pipes, fountains, and watering troughs. This was the case of the Cogolo aqueduct, completed between 1893 and 1894, with a pipeline diverted from Monte Vegaia and the construction of fountains and washhouses in tonalite. A few years later, in 1900, Celledizzo also established its own aqueduct, built with metal pipes to collect water from the Drignana stream. In this case, the water distribution was organised at nine equidistant points, served by five watering troughs and four fountains, each accompanied by a washhouse, for the benefit of the community.

Wasserleitung für die Gemeinde Cogolo. Situation

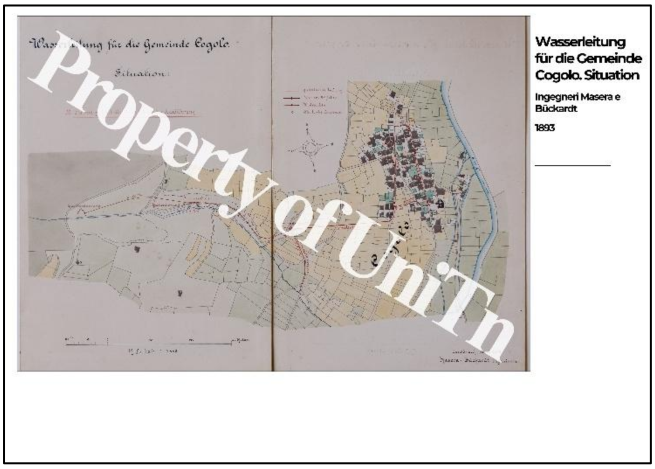
Engineers Masera and Bückardt

1893

Technical-hydraulic map on cadastral base

Coloured pen drawing

Scale 1:2,880



This technical representation on a cadastral base illustrates the water supply network of Cogolo. The legend differentiates the network's elements by marking them in red, highlighting their central role in the document. Among the features are: cast-iron pipeline (solid line); hydraulic valve (solid line with a perpendicular stroke); hydrants (solid line with a dot); and public wells (empty circle). Several measurements are also indicated, including the pressure pipe, the overflow level, and the presence of water reservoirs or springs. The location of these latter two is confirmed by the toponymy of the Austrian cadastral maps, which can be easily oriented and overlaid with the work carried out by engineers Masera and Bückardt. The place name *Pozze campi*, near the water reservoir (*Reservoir*), is unequivocal.

Mappa dimostrante l'aquadotto dimandato da Domenico Gionta alla comune di Comasine

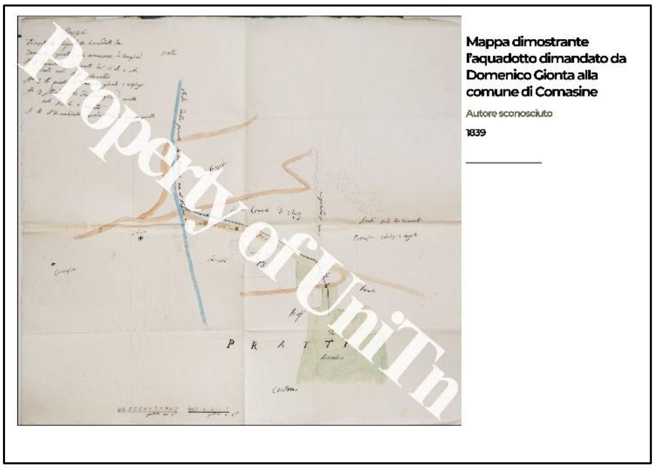
Unknown author

1839

Technical-hydraulic sketch

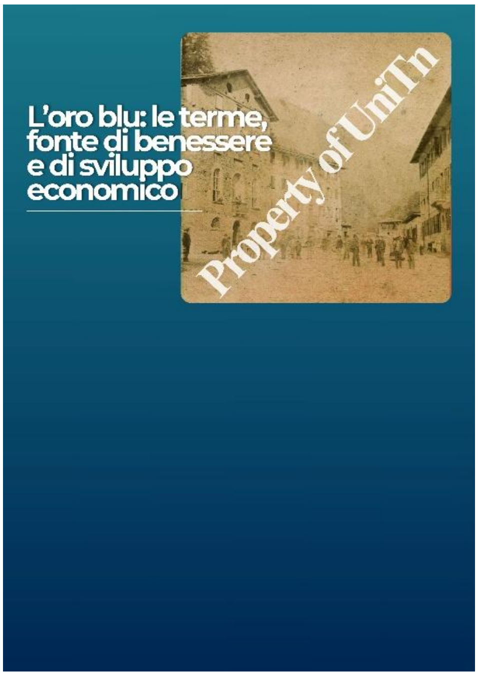
Coloured pen and pencil drawing

Scale approx. 1:2,000



The map shows the sketch of a project proposed by Domenico Gionta to the Community of Comasine to divert water from the Ponalle stream to the meadows of Barateri and Buffi, «*in order to irrigate and also to manure them*». The intention to omit the geomorphological features of the territory is evident, as they are represented only with quick, basic pencil strokes. The focus is instead on the division of landholdings belonging to local families. The only spatial reference is provided by the church of Santa Lucia, which allows the drawing to be placed within the settlement of Comasine.

Blue gold: the thermal baths, a source of well-being and economic development



Thermal water represents an important source of tourist appeal for the two valleys. In Val di Peio, the main springs are the Antica Fonte, the Nuova Fonte (also known as San Camillo), the Fontanino of Peio, and the Fontanino of Celentino. In Val di Rabbi, the Antica Fonte and the Nuova Fonte flow. Although from a chemical-physical point of view the waters of the ancient springs of Peio and Rabbi present similar characteristics - both being acidulous and ferruginous - their historical trajectories differ significantly. While in Peio the springs, though leased to private individuals, remained in public hands until the 1920s, in Rabbi the acidule, initially owned by the Thun family, passed into the hands of various Trentino families, including Pangrazzi, Daprà, Molignoni, Ruatti, and Zanella. The discovery of the ancient springs seems to have occurred in both valleys around the mid-17th century. However, it was only after 1830, with the construction of carriage roads to Peio and Rabbi, that both the bottling industry and thermal tourism grew rapidly. According to an archival report, in 1870 the visitors to the Antiche Fonti of Peio numbered 384, while those to Rabbi reached as many as 855 (AST, Capitanato Circolare di Cles, b. 202). With the commercialization of bottled water and the increase in tourist arrivals, numerous conflicts arose over the management of the thermal springs. In the last decade of the 19th century, the municipalities of Cogolo, Celledizzo, and Comasine, owners of the Antica Fonte of Peio, opposed the Municipality of Peio, holder of the Fontanino of the same name, regarding the denomination of the springs. Cogolo, Celledizzo, and Comasine believed that Peio, together with the tenant of the Fontanino, sought «*through the counterfeiting of labels, caps, and notices, to confuse as much as possible the name of the Fontanino of Peio with that of the Antica Fonte of Peio, thereby being able to market the water of the former under the name of the latter*» (ASP, Comune di Peio, b. 113). The dispute, far beyond a matter of terminology, concealed a significant economic and commercial conflict linked to the bottling industry.

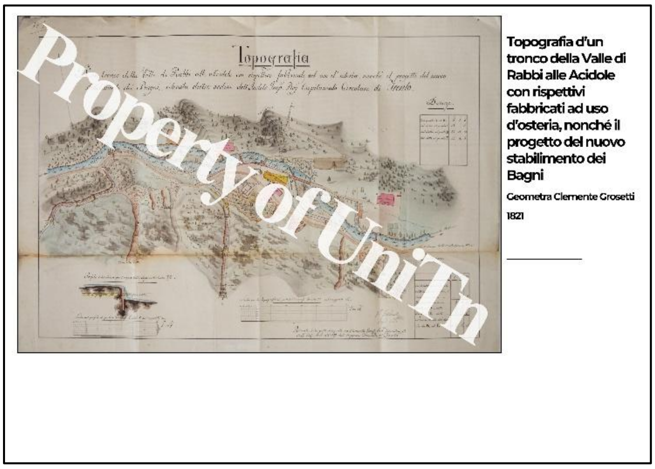
Topografia d’un tronco della Valle di Rabbi alle Acidole con rispettivi fabbricati ad uso d’osteria, nonché il progetto del nuovo stabilimento dei Bagni

Surveyor Clemente Grosetti

1821

Topographic map

Ink and watercolour drawing



Scales: approx. 1:8,250 for the topography; approx. 1:1,050 for the profile

The area of the thermal establishments of Bagni di Rabbi is illustrated in this coloured topographic representation, which shows the project for the modification and installation of buildings intended to accommodate spa guests. Beyond the depicted structures, the map draws the viewer’s attention for the wealth of information concentrated along a river stretch of just over 500 metres. From east to west, one can deduce the presence of a sawmill, confirmed by the toponymy of early 20th-century IGM (Italian Military Geographic Institute) maps. Just north of the workshop begins the first of the spa buildings, from which a water supply connection extends to the main facility and the thermal spring on the opposite bank of the Rabbies. In addition to the construction works, the profiles indicate the need for levelling interventions and for diverting the Tovo dell’acqua stream, perhaps to prevent its interference with the stability of the tourist and spa complex through landslide or flood risk. Supporting this hypothesis are the small valleys carved by the various tributaries of the Rabbies and modest areas of probable instability, depicted with loosened and stony terrain.

Progetto per la costruzione di un tratto di strada e ponte sul torrente Pegaies alle Acidule di Pejo

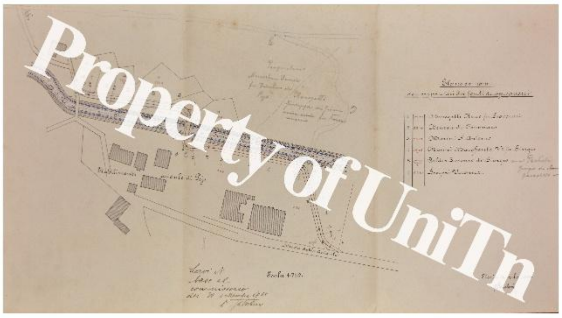
G. Parolari

1908

Technical map on cadastral base

Coloured pen drawing

Scale 1:720



Progetto per la costruzione di un tratto di strada e ponte sul torrente Pegaies alle Acidule di Pejo

G. Parolari

1908

The map highlights the route of a new road and a planned bridge for the Peio spa complex. The Noce stream, drawn in blue and bordered by its banks, forms the main axis of the map. Surrounding the watercourse are numbered plots of land with corresponding cadastral references. On the right, a list indicates the owners of the properties to be expropriated (*elenco dei nomi dei proprietari dei fondi da espropriarsi)*, showing six names with their respective parcel numbers. Buildings intended for guest accommodation are also depicted. The Gran Hotel was established in the late 19th century, although by the early 20th century the Peio Thermal Baths faced a crisis that lasted until after the First World War. The document also exhibits a technical palimpsest character, with numerous interventions carried out at different times by different hands.

Beyond the resource: the untamable danger of water

Water has always posed a serious danger to the valleys of Peio and Rabbi, which have repeatedly been struck by severe hydrogeological events, documented in numerous historical records. In Cogolo, the legend of the Madonna Nera is recounted. During a stormy night, a landslide destroyed the village of Plaza Montina. The only item saved from the destruction was a statue of the Madonna Nera, which was brought to the village church. Interpreting the event as miraculous, the inhabitants built a chapel dedicated to the Madonna of Loreto. According to some local sources, this legend may be linked to the landslide that buried the village of Pegaia in the 15th century. In Val di Rabbi, as recorded in a document from 1821, «*the spring's situation in a very narrow valley, between two high mountains composed of gravel of various sizes and much soil, provides conditions whereby, during frequent summer storms, torrents fall, not merely of water, but of earth and gravel*» (AST, Capitanto Circolare di Trento, b. 543). On 15 October 1882, a landslide in Rabbi struck the Raggio di Sole inn, causing three deaths and numerous injuries. Avalanche events were equally severe. In Peio, in the early 19th century, «*in winter and spring avalanches of snow threatened to bury the spring and the adjacent buildings*» (AST, Capitanto Circolare di Trento, b. 543). In Rabbi, in 1819, two embankments were built «*to protect the spring both from avalanches and from the Rabbies stream*» (AST, Capitanto Circolare di Trento, b. 544). Nevertheless, between the 19th and 20th centuries, Rabbi was inundated by snow flows on at least four occasions: 1867, 1883, 1888, and 1916. The 1888 event was catastrophic, when the village was hit by an eight-metre-high avalanche. Even more devastating were the floods. In Val di Peio, particularly destructive events occurred in 1578, 1665, 1772, 1778, 1789, 1850, and 1882. The nearby Val di Rabbi was also severely affected in 1772, 1789, 1882, 1885, 1901, and 1907. Hydrogeological phenomena of this magnitude caused enormous damage, profoundly marking the history and collective memory of the local communities.

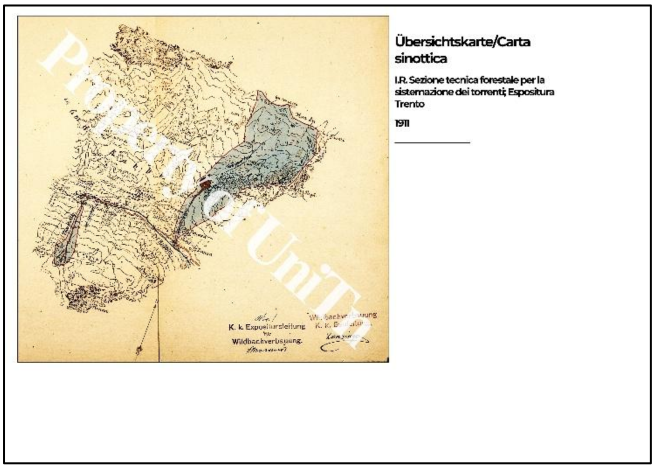
Übersichtskarte/Carta sinottica

I.R. Sezione tecnica forestale per la sistemazione dei torrenti; Espositura Trento

1911

Synoptic technical map

Scale 1:25,000



The map is part of the report by the Forest Technical Section of Trento on the management of the Rivo Pragambai and Tovo Dritto streams, tributaries of the Rabbies. It clearly shows the catchment areas of the two streams (in blue), as well as a landslide area (in brown) northeast of the village of Piazzola. Several episodes cited in the document highlight the importance of geomorphological cartography in this territorial context. Examples include: «*on the right bank* [of the Rivo Pragambai]*, following the floods of 1882 and 1885, a large landslide formed and progressively expanded*», «*in March 1888, following an avalanche from the Tovo Dritto* [...] *the slopes of the ditch were so ripped apart that the displaced material was carried away as a colossal flood*». In response to these events, the construction of river management and territorial protection works was proposed, particularly to safeguard houses, the spa facilities of Rabbi, and the carriage roads, which were repeatedly damaged by hydrogeological events.

Piano topografico di un pezzo di Noce, e poca campagna oltre il paese di Cogolo

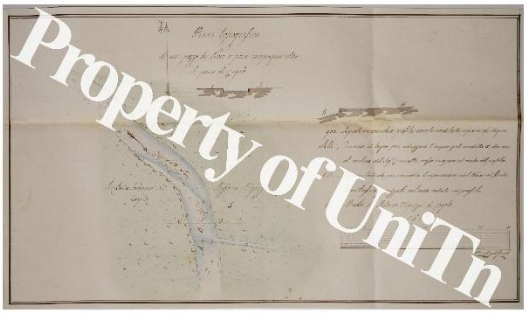
Surveyor Mocatti

1835

Topographic map and section

Pencil and watercolour

Scale approx. 1:450



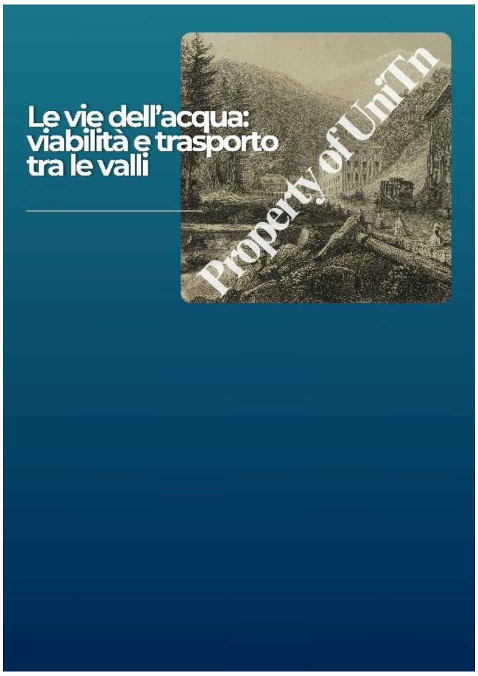
Piano topografico di un pezzo di Noce, e poca campagna oltre il paese di Cogolo

Geom. Mocatti

1835

The topographic map of a small section of the Noce near Cogolo provides a graphical representation of the request made by the miller Stefano Caserotti to construct wooden barriers to contain the river's flooding in the areas below Cei and Pianet, whose meadows had already been damaged by the September 1834 flood. According to the applicant, «*the matter requires haste, both because the Noce is small,* [...] *and because the diversion of the same water to the mill is urgent*» (AST, Giudizio Distrettuale Pretura di Malè, b.56 Cogolo, f. 21). Beyond indicating the affected lands and the names of their owners, the map shows a simple cross-section of the watercourse in which the proposed wooden barriers are outlined. It also depicts the derivation of a small irrigation channel supplying Caserotti's mill, as well as the marks left by debris carried by past floods.

The waterways: woads and transport between the valleys



Historically, in mountain valleys there has been a close connection between roads and watercourses, as carriage routes were often laid out along streams, with consequences that were frequently disastrous due to floods and landslides. Before the construction of a modest mule track leading to the Tonale Pass (the carriage road was inaugurated only in 1859), the Peio Valley was crossed by the Montozzo Pass: a winding route, also called the *Via dei Cavai*, which, reaching nearly 3,000 m a.s.l., connected Trentino with Lombardy. Montozzo in earlier times (16th–17th centuries) and later Tonale (18th–19th centuries) were crucial nodes for the passage of people, troops, and goods. Notable conflicts arose, for example, regarding the transport of bottled thermal water or wine. A document from 1711 states: «*the general mayors of the Valle d'Annone, because of the large quantity of foreign wines and spirits brought from the lower lands through the passes of Campejo, Tonale, and Molveno into these valleys, and thence forwarded toward Germany, suffer serious prejudice, as the valley is thereby excluded from trade and the sale of its own wines and spirits to Germany*» (AST, Atti Trentini, b. 27). As early as the 18th century, archival records attest to the presence of mule tracks in the valleys of Rabbi and Peio. However, proper carriage roads were built only in 1825 in Rabbi and in 1834 in Peio, the latter being further upgraded in 1874–75. Of particular interest was the consortium-based management of the Rabbi road, whose maintenance involved all the communities of the Sole Valley, owners of forests and pastures in Rabbi. In addition to the main roads, between the 18th and 19th centuries, municipal and local roads were progressively constructed to serve farmsteads and alpine pastures, improving the transport of hay and, above all, timber. Numerous disputes also arose over road construction, as the expropriation of land led to grievances and legal appeals against the requisitions.

Valli di Non e Sole distretto Trentino anticamente Anaunia parte della Rezia prima

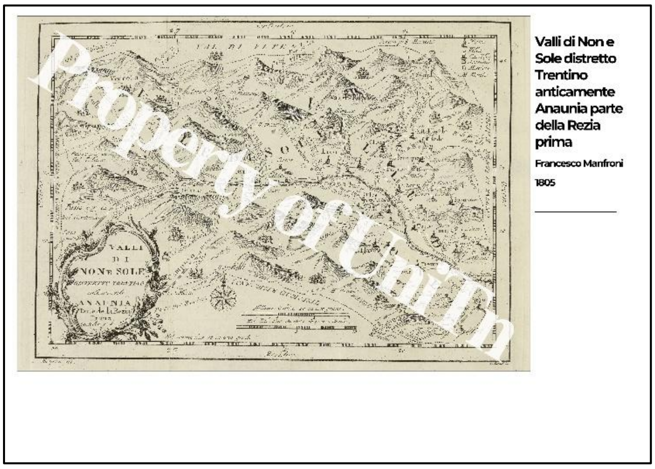
Francesco Manfroni

1805

Topographic map

Copperplate engraving

Scale approx. 1:29,000



Francesco Manfroni of Caldes produced this map for the volume *Periodi Istorici e topografia delle Valli di Non e Sole nel Trentino meridionale* by Jacopo Antonio Maffei. The document stands out for numerous cartographic elements, including a frame with scale, coordinates and cardinal points, a compass rose, a cartouche, and a legend. The legend provides an interesting distinction between buildings, mountains, parish churches, thermal establishments, and mines. Through cartography, Manfroni, and through effective narrative, Maffei, guide us along the main villages of the Peio Valley, which «*is divided by a branch of the Noce stream*» (Manfroni 1805, p. 135), and the Rabbi Valley, «*filled with farmsteads and alpine pastures*» (Manfroni 1805, p. 137). The map presents a detailed representation of the road network, including the area of Peio and Rabbi valleys. In particular, the passes leading to Val Camonica (Tonale), Valtellina (Montozzo), the Grisons (Sforcella), Val Venosta (Martello), and Val d'Ultimo (Rabbi) are highlighted.

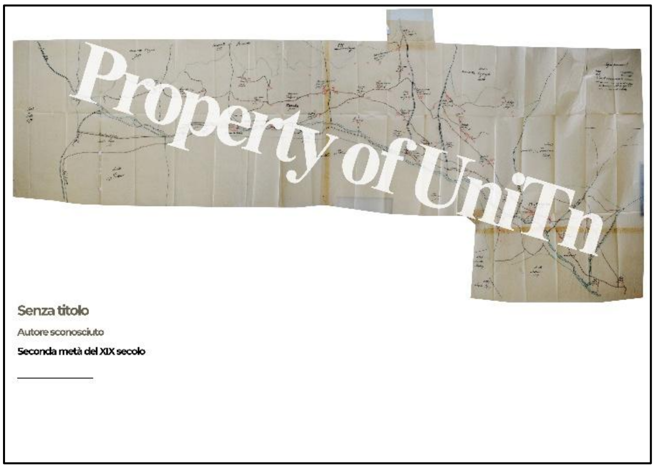
No title

Unknown author

Second half of the 19th century

Topographic map

Pen and colored ink drawing



The map depicts, in its intricate and extensive detail, the roads winding around the Rabbies stream and its tributaries, from Bagni di Rabbi to San Bernardo, also showing the various bridges connecting the two banks of the waterways. The content of the work is particularly valuable, as it provides data reflecting the state of the different localities in the upper Rabbi Valley during the second half of the 19th century. In addition to the main street toponyms, the document highlights the various buildings comprising the villages and hamlets of the valley. For each of these, the number of houses and families is indicated - at the thermal establishments of Rabbi, thirteen hotels are noted.