

Geosites of International importance

- SP1 Murge antiform edge
- SP2 Bauxite Mines of Murgetta Rossa (Turonian unconformity)
- SP4 The foredeep succession pinching on the foreland plank (Plio-Pleistocene)
- SP10 The Murge Alte scarp
- SP11 The Minervino Murge scarp
- AP1 Puglia well
- AP2 Palorbitolina-rich beds
- AP4 *Sauvagesia* and *Caprinula* beds
- AP5 Lagoonal strata with a *Pithonomorpha* skeleton
- AP7 Dinosaurs tracks of Cava Pantrelli
- BT4 Pliocene bioerosion in the *Calcarene di Gravina* of Murgetta Grande
- BT8 A Gilbert-type delta within heterozoan carbonate (early Pleistocene)
- BT9 *Genus Terebratula*: Solutions to some historical, geological and biological puzzles
- BT10 The Scacchi collection: a Quaternary reference (Albanello locality, Gravina)
- BT12 A new specie of *Limatula* (L. *gravinae*)
- BT13 Trace fossil assemblage of Notargiacomo's quarry
- K 2 "Pulo di Altamura" sinkhole
- K2 "Grave del Pulo" deep karst abyss (included in K 2)
- K3 "Grotta di Lamalunga" cave
- MG4 "Castel del Monte" castle

Geosites of National importance

- SP3 Panoramic view of the *Calcare a Planorbis* Fm (lacustrine carbonate, Oligocene)
- SP5 Vallone Impiso: a transgressive Plio-Pleistocene heterozoan carbonate system from eolian dunes to offshore
- SP6 Gravina di Gravina Canyon
- SP14 Karstic landscape of Murgia Ruvese
- SP16 The Grottellini area
- SP17 Panoramic point of Laterza
- AP6 Unconformity of Cava Cavallerizza
- AP8 The *Calcare a Planorbis*
- QU2 Debris slope Minervino Murge
- K1 Paleokarst at the Porcili quarry
- K4 Tre Paduli karst sinkhole complex
- K5 "Masseria Previticelli" deep karst abyss
- K6 "Grave di Faraualla" deep karst abyss
- K8 "Pulicchio di Toritto" sinkhole
- K10 Cavone sinkhole and deep karst abyss
- K11 "Gurgo di Andria (Gurgo Ruotolo)" deep karst abyss
- K12 Curtomartino Cave
- MG3 "Foresta Mercadante" forest
- MG14 Paladini Dolmen and the Corato guide level
- MG15 "Acquaviva delle Fonti" wells
- TS1 The Monte Scorzone fault reactivation
- TS3 The syndepositional fault of Gravina

GENERAL INFORMATIONS

Location: The MurGeopark (Aspiring UNESCO Geopark) is located in Europe, in the eastern sector of southern Italy (Puglia), roughly between 40°37' and 41°16' N and between 15°58' and 16°52' E.

Surface Area (km²): ≈2.850 km² (≈255.000 ha)

Short physical and human geography characteristics: The area basically corresponds with the northwestern Alta Murgia and the Premurgetta area of Puglia. The whole area is mainly hilly, with altitudes up to about 680 m. The Alta Murgia area is characterized by the occurrence of woods, karst caves, sinkholes, escarpments, peculiar streams, extensive pastures and architectural elements with towns related to agricultural activity and pastoralism. The area includes the municipal territory of fifteen towns between the provinces of Bari, BAT, and Taranto. Total population reaches about 440.000 inhabitants.

HOW TO REACH THE ASPIRING GEOPARK

By plane or train: from the International Airport of Bari "Karol Wojtyła" you can reach the center of Bari by Ferrovie Bari-Nord (Ferrotromviaria S.p.a.). If you want to go from Bari to Gravina in Puglia, you can take one of the Ferrovie Appulo Lucane (FAL) trains that cross several towns of the Murgia. Alternatively, you can get to Gioia del Colle by train using the state railways (Trenitalia) and from there proceed to Santeramo, Altamura, Gravina in Puglia, Poggiorsini, Spinazzola or Minervino Murge. The Ferrovie Bari-Nord (Ferrotromviaria S.p.a.) railways take you to Bitonto, Ruvo, Corato and Andria.

By car: from the A14 Bologna-Bari motorway, exit at Trani, Molfetta, Bitonto, Bari-Nord, Bari-Sud, Gioia del Colle and follow the directions to get to the towns comprised by the Aspiring Geopark. Alternatively, this area can be accessed from Basilicata and Calabria via state roads 96 and 99.

MAP LEGEND

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- Geosites of International importance
- Geosites of National importance
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- Motorway
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- Cycle Paths
- Trekking Routes
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- Geotourist Itinerary: from Belvedere to Belvedere
- Geotourist Itinerary: Between History and Cave Habitat
- Geotourist Itinerary: Paleocity
- Geotourist Itinerary: In the shadow of Federico
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- Geotourist Itinerary: Southern Premurgia
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QGIS processing on a cartographic basis of the site www.sit.puglia.it



1 from Belvedere to Belvedere

A tour of the most evocative geological landscapes of the Alta Murgia Park, including villages and viewpoints, rock-hewn churches, quarries, caves and forests. **Minervino Murge** is also called the "balcony of Puglia", with breathtaking landscapes, both natural and man-made, such as the huge limestone quarries. Here we find Lama Matitani, which cuts through the stratifications of the Murcian Highlands, and the Michaelic Cult cave of Saint Michael's Grotto. **Spinazzola** is added to the itinerary, with sensational views of the Premurgia Bradanica to the north and splendid views of Mount Vulture, both from the historic Rocchetta Sant'Antonio railway and the rocky archaeological site of Grotte di Grotte. The jewel in the crown of this area are the red shades of the Bauxite mines in the Murgetta Rossa district and the "invisible" Garagnone Castle with its Rocca Carsica. To the south of Garagnone, we also find the small town of **Poggiorsini** with its panoramic Belvedere (geosite of regional importance) overlooking the southern Bradanic Trough.

Where
Minervino Murge - Spinazzola - Poggiorsini

Other Interests
Archaeology; Speleology; Religion; Architecture; Biodiversity; Ancient History; Modern History; Food and Wine



4 in the Shadow of Federico

The memory of Frederick II of Swabia, the "Stupor Mundi", is present everywhere on the territory of the Alta Murgia National Park. Through this itinerary you will be able to look for evidence and hints linked to the Holy Roman Emperor, while being captured by beautiful colours and shapes. In the **Andria** area, you will be able to discover the Gurgos geosite, one of the largest karstic dolines in Apulia, and **Castel del Monte**. The octagonal fortress, a UNESCO World Heritage Site since 1996, possesses exceptional universal value due to the perfection of its shapes, its harmony and the fusion of various cultural elements. It was built with blocks of Murcian limestone and embellished with architectural details made of rock from the Gargano Promontory. The itinerary then continues to **Corato**, where a section of the Apian Way and Trajan Way can be travelled along with typical karst landscapes, poorly marked lamas and traditional regimentation of surface waters with dry-stone walls. Olive and almond monocultures predominate in this area, as well as ephemeral and steppe-like spontaneous vegetation that explodes into ephemeral river incisions in the Mediterranean scrub. Deviating briefly from the itinerary, you can reach the Necropolis of tumulus tombs from the Late Bronze Age (7th - 6th century B.C.) located in the "San Magno" district.

Where
Andria - Corato

Other Interests
Archaeology; Speleology; Architecture; Biodiversity; Ancient History; Modern History; Religion; Food and Wine



2022
**Geotourist
MAP**

Agile map of the
Aspiring Geopark
and its geosites

tourist cartography on a scale
1:200.000

GEOLOGICAL GLOSSARY

Geology: A science that studies the planet Earth with reference to its composition, structure and configuration, its surface and the processes operating on it, seeking to gain knowledge of the evolution it has undergone since the very beginnings of its formation (around 4.7 billion years ago). It constitutes a point of convergence of several disciplines (earth sciences). It has strong links with physics (geophysics), chemistry (geochemistry) and planetology, as well as with all disciplines related to the natural sciences, such as physical geography and biology.

Source: *Enciclopedia TRECCANI*

Adria: Oceanic-type tectonic plate that surfaced in the ancient Tethys Sea during the Mesozoic Era. Today it lies submerged under the current Mediterranean Sea and Italian peninsula, hence the name Adriatic Sea. Its residual emerged patches surface in Apulia and the Istrian Karst. Its sediments, formed in a tropical sea in a carbonate platform environment, constitute the entire Murcian Highlands.

Source: *Application Dossier Murge aUGGp*

Geopark: An area with a geological and geomorphological heritage that is significant in terms of rarity, scientific interest, aesthetic appeal and educational value. Its identity is linked to geology and enriched by its natural and cultural heritage. It includes geosites of geological, archaeological, ecological, historical and cultural interest. It enhances the geological and geomorphological heritage by promoting sustainable development, environmental education, training, increasing scientific

research in the various disciplines of Earth Sciences and sustainable tourism or geotourism. It favours geological heritage conservation strategies that do not exclude man from enjoying the environment. It fights climate change and embraces sustainability goals. It is managed by a coherent management structure, which has adopted a sustainable and durable economic development strategy. It involves inhabitants, authorities, public organisations and businesses in the management and enhancement of geological sites through a strategy of protection, education and sustainable development, aiming at local economic progress. It improves the natural environment and thus the lives of the people living in it.

Source: *UNESCO*

Geosite: It is an area that includes one or more geological elements that take on different scientific characteristics in relation to the surrounding areas as well as to its palaeo-ethno-anthropological features. This territorial element bears witness to significant geological events and/or processes at the local, regional or global scale, is protected by a Geopark or public reference body and is characterized by rare or exclusive features compared to the reference scale.

Source: *Publication "Geositi della Puglia" (Geosites of Apulia)*



2 between History and Habitat Cave

Gravina in Puglia is known as the "City of Water and Stone" because of its outcropping rock and its canyon-like fluvial incision also known as "La Gravina" (The Ravine). The Gravina Canyon was modelled by water and the uplift of the Murge in the Quaternary period. Its history is lost in time, where we find marine sediments spread in sections all along the ravine, as an evolution of the whole Adriatic region. These sediments are rich in fossils, the rocks allow the excavation and modelling of epigean and hypogean settlements ranging from the Palaeolithic to the Bronze Age. The landscape is a succession of several carvings in the rock on which we find an enormous heritage culminating in its architecture. Aqueducts and underground canals are able to supply the city even in times of low rainfall. Gravina in Puglia was the birthplace of one of the most important Italian geologists of the 19th century: Arcangelo Scacchi.

Where
Gravina in Puglia

Other Interests
Archaeology; Urban Speleology; Literature; Architecture; Biodiversity; Ancient History; Modern History; Food and Wine



3 Paleocity

From the Dinosaurs to the Neanderthal to the Cold War

Surrounded by the green hills and steep escarpments of the Alta Murgia of Bari, **Altamura**, also known as the "Lioness of Apulia", is the city of the Romanesque Federician Cathedral and PDO (Protected Designation of Origin) bread. Its territory, inhabited since prehistoric times, as evidenced by the Megalithic Walls (Alum Murum in Germanic Latin means "Ancient Wall"), was re-founded in medieval times by Emperor Frederick II of Swabia. Altamura tells stories of dinosaurs, with one of the largest footprint sites in the world, stories of prehistoric men, of epigean and hypogean karst environments such as the huge Pulo sinkhole or the Faraulla and Preveticelli caves. It is also home to classical necropolises, medieval stone architecture and war installations from the First and Second World Wars, in a fascinating historical landscape, rich in biodiversity and unique agronomic varieties, linked to the nature of the rocky substrate where they reside.

Where
Altamura

Other Interests
Palaeoanthropology; Archaeology; Speleology; Architecture; Biodiversity; Ancient History; Modern History; Food and Wine



5 Karst landscape of the Ruvo di Puglia Murgia

The itinerary develops mainly in the **Ruvo di Puglia** area, between the ancient village and the surrounding Murcian territory. A journey among large masserie and sheep shelters in which ancient legends and traditions linked to sheep-farming and rural activities are intertwined, like collecting scarce water resources by means of limestone rocks, intercepting deep water flaps typical of karst territories, or creating rainwater tanks in the most unthinkable places. The itinerary continues towards **Bitonto** at Jazzo Pietre Tagliate, a jewel of rural architecture with its still clearly visible perimeter walls and farmhouses. Reforestation, which provides shade and mitigates soil erosion during periods of intense - and yet ephemeral - rainfall, interrupts the monotony of the Murcian pastures and channels water into an immense lama: the Tifris River. This incision joins the Park to the Adriatic Sea serving as an ecological corridor: it starts in Ruvo di Puglia, takes on the form of a canyon in Bitonto and flows into Bari under the name Lama Balice. Today, it is the largest protected regional park in the Province of Bari.

Dove
Ruvo di Puglia - Bitonto

Altri interessi
Geomorphology; Karst Phenomena; Stratigraphy; Palaeontology; Hydrogeology; Mineralogy



6 Southern Premurgia

A tour dedicated to the multi-faceted karst rock and its passage through the southernmost area of the park from north to south towards the deposits of the Bradanic Trough. This territory is shaped by the action of water and the hand of man. Here you will find a landscape riddled with ravines and deep cavities, scattered with stone constructions such as trulli and dry-stone walls. The landscape between **Santeramo in Colle** and **Laterza** is unique, almost "lunar", with progressive descending terraces separated by faults and flat terraced deposits overlooking deep and imperious incisions such as the ravines. This diversity encompasses a rich natural, faunal and geological heritage. The main issue here, too, is man's ability to make use of the few sources of water for traditional agriculture and animal husbandry, which today becomes an example of sustainability in maintaining the precarious planetary climate.

Where
Santeramo in Colle - Laterza

Other Interests
Archaeology; Speleology; Architecture; Biodiversity; Ancient History; Modern History; Religion; Food and Wine



7 the Lower Murgia

Carbonate and stony landscape affected by peculiar karst phenomena, such as sinkholes, lamas, and caves of great charm and sometimes inhabited by man in prehistoric times. The area, including the water basin that flows into Bari (Conca di Bari), just like the whole park, preserves rock sculptures of incredible visual impact, shaped by water and human activity with important reforestation works aimed at mitigating the power of water in rainy seasons. This is the *raison d'être* of the Foresta Mercadante (forest), a precious Apulian green lung planted in the 1920s to fight soil erosion and the risk of flooding. The route touches on **Grumo Appula** with its lamas, **Toritto** with its olive and almond trees, **Cassano Murge** with its forest and **Acquaviva delle Fonti** with its underground wells that give the town its name, thus outlining the outflow of water from the southern portion of the Park to the Adriatic Sea, creating an endless network of ecological corridors for fauna and flora.

Where
Grumo Appula - Toritto - Cassano Murge - Acquaviva delle Fonti

Other Interests
Palaeoanthropology; Archaeology; Speleology; Architecture; Biodiversity; Ancient History; Modern History; Food and Wine



parco nazionale dell'**alta murgia**

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ABOUT MURGEOPARK

Adria: the (almost) lost Continent
The Alta Murgia National Park and the Apulian Premurge are part of a karst territory exceptionally rich in "geosites", which are located on the surface and underground. The word geosite stands for a "site of geological interest" and represents an element of geodiversity of international, national and local value, based on its uniqueness in the geological history of the planet. As a whole, the area including the Alta Murgia and the Premurge represent a unique element of geodiversity in the world, being the last entrenched patch (along with the Istrian Karst) of an old continent: the Adria. In fact, the entire region corresponds to a portion of the Mediterranean basin where the old Adria Plate "survives". This continent disappeared almost completely between Africa and Europe due to their convergence. This characteristic relevation contributed to the Alta Murgia National Park being presented as a candidate as a **Unesco Aspiring Geopark**.

