



REGIONE AUTÒNOMA DE SARDIGNA
REGIONE AUTONOMA DELLA SARDEGNA

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Associazione Speleo Club Nuxis

Initiative financed with the RAS L.R. 7/1955 - annuity 2021

“Sa Marchesa” Geo Speleo Archaeological site



Nuxis (Acquacadda) – Province South Sardinia

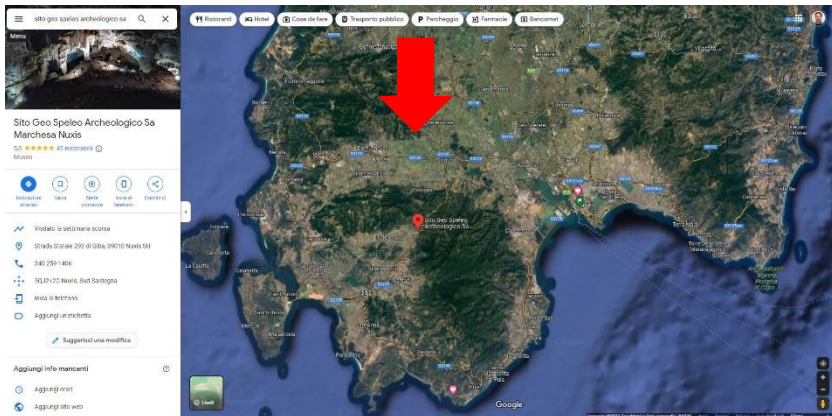
On the initiative of the Speleo Club Nuxis Association:

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The archaeological geo-speleological site "**Sa Marchesa**" is located in the municipality of **Nuxis**, in the locality of **Acquacadda**, and is managed by the **cultural association Speleo Club Nuxis**. The site has some historical-environmental values which are listed in this brochure. It is located about fifty kilometers from **Cagliari** and can be reached from both the **S.S. no. 293**, which from **Siliqua** leads to Giba near km 50.400, and the **S.P. no. 78**, which from **Carbonia** joins the S.S. no. 293 near the crossroads for **Siliqua**.



THE GEOLOGICAL-SPELEOLOGICAL MUSEUM

In the buildings of the **former "Sa Marchesa" mine**, managed with an agreement between the **Municipality of Nuxis** and the **Speleo Club Nuxis cultural association**, the setting up of the **geo-speleological museum** has been arranged with tools and utensils used for studies and research in earth sciences and specifically in the geological sector, such as coring, drilling, geophysical prospecting and so on. Is present also an amazing collection of both Sardinian and non-Island minerals and fossils: samples of cores of local rocks, rock cylinders obtained from geognostic drilling, partially polished which represent the geo-lithological outcrops of lower Sulcis exposed both on **wooden shelves with special lighting**. As far as the **speleo-archaeological sector** is concerned, faithful copies of vases found in hypogean environments, mainly in caves, have been reconstructed, also exhibited in suitable display cases that allow us to document, even if partially, the main prehistoric cultures ranging from the Ancient Neolithic to the Iron Age, accompanied by descriptions. In the same room was created

an educational panel concerning the **human evolutionary history** with the display of numerous reproductions of hominid craniums specially selected to retrace the main stages of the human "evolutionary bush".



For the **speleological sector** a small room has been set up in which are shown the tools used by the speleologists during their work:

the descender, the handle, the collapse, the carabiners and so on. In other compartments, on special display cases, there are **objects used for speleological explorations, topographic surveys, sector studies** and so on. To better represent and illustrate both the archaeological, mining and speleological environments, **several panels** have been printed.



THE CAVE OF ACQUACADDA

To improve the enhancement and the quality of the visit to the **cave**, lighting has been arranged using maxi mobile illuminators in order to make the main speleothems visible without altering the underground environment. The visit is also enhanced by the presence of **small display panels** in which are described the **speleothems and the geological and geomorphological formations** present inside the cavity.





Inside it you can observe geological and geomorphological singularities, including a very important conglomerate that determines the passage between two geological formations: the **Paleozoic Era**, precisely to the lower Cambrian (**Gonnesa Formation**) and the middle Cambrian (**Campo Pisano Formation**) in which the mineral deposits of pneumatolytic-hydrothermal genesis were formed. There are also interesting speleothems,

including **stalactites**, **stalagmites**, **lava flows**, **canopies**, **cave pearls**, etc., and a very interesting **ossiferous breccia** which has yet to be studied.



THE GEOLOGICAL PARK

In the **square outside** the building used as a geological-speleological museum have been placed some medium-sized **rock samples** with the relative descriptions on panels that represent the **main lithologies present in the Sulcis.**

As far as depositology is concerned, it is possible to observe the **outcrop of a copper mineralized body** with the presence of **malachite** with its characteristic green colour, to which an **illustrative bulletin board** is connected with the description of the formation of the deposit and related studies by the Directors who worked in the mine. You can also observe a stratigraphic column

of the lower Sulcis, made with rocks.



THE EDUCATIONAL WORKSHOPS

On the site, **upon notification**, some **educational workshops** can be implemented, concerning topics of geo-speleological and archaeological interest, i.e.:

MINERALOGY AND PETROGRAPHY LABORATORY, in which a mineralogy and petrography **microscope** can be used to observe samples of **mineral crystals** and **thin sections** of small rocks from

Sardinia and, in particular, from Sulcis Iglesiente;

PALEONTOLOGY LABORATORY, equipped with boxes in which **paleontological excavation simulations** can be carried out and subsequent classification of the samples found;

ARCHAEOLOGICAL LABORATORY, also equipped with boxes in which can be carried out **archaeological excavation simulations** and subsequent **classification of the finds**;

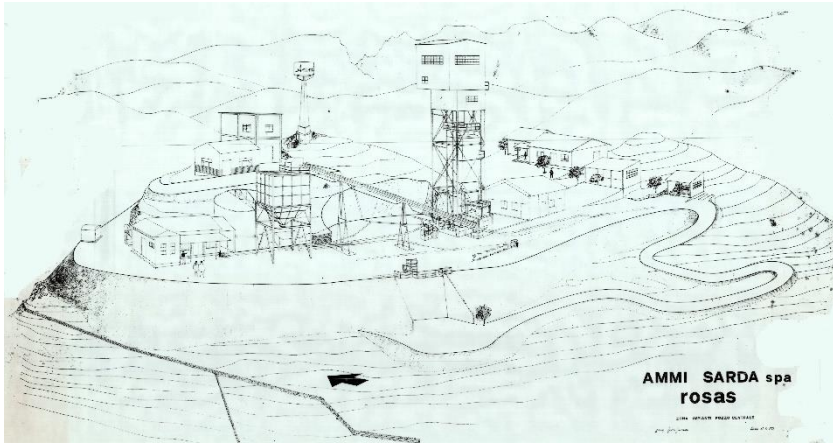
CARTOGRAPHY LABORATORY. In this laboratory, **topographic and thematic maps** can be read and interpreted, and after having carried out a topographic survey with compasses, the measured data will be returned on paper.

HISTORY OF THE "SA MARCHESA" MINE



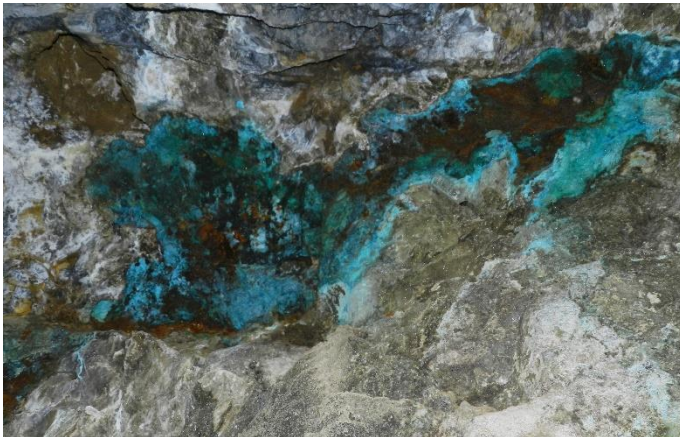
The history of the "**Sa Marchesa**" mine begins in **1881** with the declaration of discovery of the deposit by **Mr. Julien Hillarion Roux Marquis of Escombrera**, who, with **Royal Decree of 20 May 1883**, granted the concession for the extraction of minerals containing **Lead, Zinc, Silver and Copper**. The same held the mining title until **1891**, the year in which the concession was

revoked following the bankruptcy of the company.



The cultivations in this period were mainly concentrated in open-air construction sites and only partially underground in the tunnel called "**Riu Mannu**", near the river of the same name. Near the Rio Mannu, in this period a small washery was installed, consisting of **5 sieves** for enriching the mineral, obtaining however poor results, therefore, it was preferred to move on to enrichment through manual sorting. The mine remained inactive from March **1891** until the concession was awarded, in February **1896**, to the Belgian engineer **Emilio Jacob** who later, in **1904**, transferred the

concession to the "**Società Anonimè Miniere**". In this period the cultivations were concentrated underground, in the "**Leone**", "**Mannu**" and "**Ilario**" tunnels and, to a limited extent, in the "**Colomba**" and "**Trinità**" open-air construction sites. In **1911** the "**Società Anonimè Miniere**" passed the concession to **Mr. Karl William Wright** who managed it until July **1918**, in turn transferring the mining title to the "**Società Miniere Domusnovas**" which, in May **1924**, changed the company name to "**Società Miniere di Rosas**".





With the application of **Royal Decree No. 1443 of July 19, 1927**, there was the reorganization of the mining legislation, which allowed in **1930** the perpetual confirmation of the concession to the "**Società Anonima Miniere di Rosas**" for the extraction of **Zinc, Lead, Copper** and **Silver** minerals. In the period of management of the mine by this company, the activities in the various extraction sites were limited to maintenance work and searches for new mineralizations, alternating with long periods of inactivity. In **1962** the concession passed to the **A.M.M.I. S.P.A.** that starts the activities by taking minerals from landfills in the various construction sites cultivated in the past, to send them to the **washery** of the nearby **mining village of Rosas**.

In **1965** the construction of the "**Pozzo Angela**" began, located in the "**Casetta Bianca**" construction site, which in **1970** made possible to connect the various construction sites underground, through direct levels, for the entire development of the mine. In November **1979** the management of the mine was transferred to **SAMIM S.P.A.** that on **20 December 1984** definitively renounced the mining

concession.



At the **end of the 90s** the mining area of the Sa Marchesa concession definitively passed to the **Municipality of Nuxis** which in **2000**, through **POR Sardegna funds**, started a redevelopment project of the buildings present in the construction site called "**Casetta Bianca**". Since **2001** the mine has been part of the **Historical and Environmental Geomining Park of Sardinia**.

THE ARCHAEOLOGICAL INVESTIGATIONS CONDUCTED AT THE ACQUACADDA CAVE (2019 – 2022)

The Acquacadda cave has a long history in terms of geological, but also anthropic, events. It is in fact a **site frequented for cultic/funerary purposes at least since the Copper Age (III millennium BC)**. The cave was already known in the literature as it was the subject of a **first excavation tests**, completely unpublished, in the **60s of the last century**. In **September 2019**, the **University of Cagliari** decided to resume these excavations, also with the help of modern archaeological and archaeometric methodologies. The activities were made possible thanks to the excavation concession by the **MIC - Ministry of Culture** and were carried out with the contribution of the **Autonomous Region of Sardinia**, the **Historical Environmental Geomining Park of Sardinia** and the **Municipality of Nuxis**, with the technical support of the **Speleo Club Nuxis Association**, and in collaboration with the **Superintendency of Archaeology, Fine Arts and Landscape for the Metropolitan City of Cagliari** and for the **Provinces of**

Oristano and South Sardinia. The cave, identified in the Cave Registry of Sardinia under the number **SA-CA 734**, is located in the area of the former mine on the top of a hill currently modified by human intervention following the mining activity (**230 meters above sea level**). From the Geo-Spelo-Archaeological site of Sa Marchesa, which houses the cave, you can observe a **stupendous panorama** that allows you to observe part of the lower Sulcis, in particular the reliefs belonging to the different geological eras, from the **Paleozoic** (Lower Cambrian, approx. 540 million years), to the **Quaternary**, passing through the **Tertiary** era which highlights both the continental formations, i.e. deposited by the rivers of the Cenozoic (about 40 million years) and the **volcanic** ones (from 30 to 10 million years).

In **2019** the first archaeological excavation campaign was launched, directed by Professor **Riccardo Cicilloni**, Associate Professor of Prehistory and Protohistory at the Department of Letters, Languages and Cultural Heritage of the **University of Cagliari** in collaboration with Prof. **Elisabetta Marini** and Prof. **Vitale**

Sparacello of the Department of Life and Environmental Sciences. Excavation took place throughout the month of **September**. A team of about **30 students** from various European and international universities took part in the research activities, as well as Cagliari, the universities of Bologna, Granada, Barcelona and Melbourne, coordinated in the field by archaeologists **Marco Cabras** and **Federico Porcedda**. Preliminarily a scientific collection of the superficial archaeological materials was carried out, visible in abundant numbers on the current floor of the cave. Subsequently, 2 excavation probes were carried out. The first, in Hall A, was called "**Saggio A1**", a quadrangular area of 5 x 5 m adjacent to the sector affected by the excavations of the 1960s by Prof. **Maria Luisa Ferrarese Ceruti**. The second, in the innermost Hall B, called "**Saggio B1**", with dimensions of 3 x 3 m.

In **Saggio B1**, under a thick layer of dust, partly covered by a calcareous concretion, was found a hearth associated with Monte Claro pottery, which yielded interesting remains of a meal that has been analysed.



In **Saggio A1**, still under a thick layer of dust, an interesting situation, still to be analysed in detail, constituted by a vast dispersion of fragmented ceramic materials, always referable to the **Monte Claro culture**, perhaps pertaining to rituals not yet clearly defined. Few human remains, being studied by the team of Prof. Elisabetta Marini, would seem to testify the funerary use of the cave. Furthermore, there are numerous faunal and microfaunal

remains which testify an important occupation of the cave as a natural habitat as well as a place for cooking and consuming food (**Saggio B1**).

During the year **2020**, due to the Covid-19 pandemic, the investigations were not conducted. Instead, they resumed, with all the anti-contagion precautions, during the month of **September 2021**.



In this case, the excavation of **Saggio A1** was enlarged, which confirmed the presence of the vast dispersion of **fragmented ceramic materials**, this time, with the addition of the discovery of **metallic elements**, such as a Copper Age **dagger** and some **awls**, and of additional **human bone remains** not in anatomical

connection.

The third excavation campaign was conducted in **September 2022** and involved the investigation of **all three rooms of the cave**. In the innermost room was made an **excavation probe (C1)**, which unfortunately did not reveal archaeological levels. In room A, **Saggio A1** was further expanded in order to continue the investigation into the extent of the dispersion of fragmented ceramic materials. Another **excavation probe (B2)** was made halfway between probes A1 and B1, also in this case, to confirm the presence of the **"ceramic bed"** in hall B of the cave. The investigation gave a **positive result**, returning another portion of the concentration of ceramic fragments of vases and situlae from the **Monte Claro Culture** as well as **another copper dagger**.

The studies conducted so far, still at an initial stage, but which make us hope for an interesting future, for now **confirm the importance of the Acquacadda cave for the prehistoric peoples of the Sulcis region**. The general picture and the detailed aspects of the events that took place inside the cave, **as well as its primary**

function, are emerging, but still need to be clearly clarified by the analysis that the **research team** has put in place: palaeofaunistic, geological, sedimentological, paleobotanical, bioarchaeological, anthropological, archaeometric. All this **teamwork** will give back a cross-section of the life of the people who lived around the cave during the **Copper Age of Sardinia**.





The excavations of the Grotta di Acquacadda are conducted by the scientific direction of Prof. Riccardo Cicilloni - University of Cagliari (with the concession of the MIC - Ministry of Culture).



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In collaboration with the Parco Geominerario Storico Ambientale della Sardegna



The buildings of Sa Marchesa are owned by the Municipality of Nuxis (South Sardinia)



Comune di Nuxis

The Sa Marchesa Site is managed by the Speleo Club Nuxis Association

