

10^m International ProGEO Symposium

Abstract Book

BUILDING CONNECTIONS FOR GLOBAL GEOCONSERVATION

Editors: G. Lozano, J. Luengo, A. Cabrera
and J. Vegas



10th International ProGEO online Symposium

ABSTRACT BOOK

**BUILDING CONNECTIONS FOR
GLOBAL GEOCONSERVATION**

Editors

Gonzalo Lozano, Javier Luengo, Ana Cabrera and Juana Vegas

Instituto Geológico y Minero de España

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Drystone Walls: Interface between Geological and Cultural Heritage?

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Introduction

The aim of this work is to show the existence of interfaces between various types of heritage and the benefits of these heritage's crossing. Qualitative non-interventionist methodologies were used, and bibliographic, cartographic, and field visits were carried out. Visits guided by the authors and discussions with specialists and non-specialists were a priceless support of the realization of the study. The interaction with the local population was an important part of the methodology to understand the territories in question. The deductive method was also used.

Drystone Walls as Geological and Cultural Heritage

Drystone walls, i.e. walls made of stone without mortar, are common in regions where slopes prevail. In the authors' opinion, they represent an interface between natural-geological and cultural vernacular heritage (Rosendahl & Gonçalves, 2019). They belong to the natural geological heritage because

- they are made of local stones,
- they are helpful for the geological mapping of a region, because their stones were collected from the fields aside,
- the geological setting of an area determines if such a wall is necessary or not,
- they interfere with the surface and subsurface water flows,
- they slow down erosional processes like soil creeping or landslides,
- they shape typical landscapes (fig. 1 A), and
- they create a lot of ecological niches and habitats for animals and plants.

Their role in cultural vernacular heritage is that, for instance:

- they are made by man to make agriculture possible in slopes creating plane areas,
- they retain surface and subsurface water e.g. for the plantation and protection against wildfires,
- they protect agricultural areas in lower places against falling rocks and erosion by torrents,
- by the removal of their building stones the fields are being cleaned and can be better ploughed.

Drystone Walls in Algarve

The region of Algarve (southern Portugal) is built up, from north to south, by carboniferous schists and greywackes, deformed by the variscan orogeny, with a massiv of nepheline syenitic rocks which intruded during the Upper Cretaceous, a narrow west-east striking strip of Upper Triassic and Lower Jurassic sandstones, clays and volcanic rocks, a wide outcrop of Jurassic limestone and marls, and finally sediments of Cretaceous, Neogene, Paleogene and Quaternary ages.

The drystone walls reflect the local geological setting of the place where they were built. The different types of rocks used in the walls give them a typical look which changes when we come to another area. This look is created due to the colour, origin, kind of deposition, weathering forms and other characteristics of the rocks (fig. 1 B-H). The drystone walls can be built on the soil or use the outcrop of geological formations as their base, joining the geological and cultural heritage in one place (fig.1H).

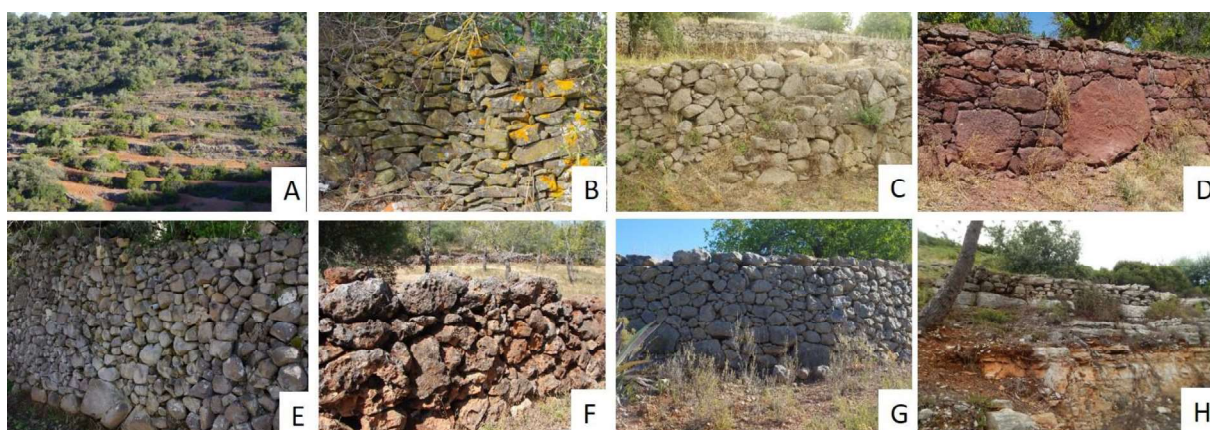


Fig. 1. A – Landscape with drystone walls, Cerro de São Miguel, Algarve; B – Drystone wall made of carboniferous schists and greywackes, Malhão, Algarve; C – Drystone wall made of nepheline syenite blocks, Maçarotal, Algarve; D – Drystone wall made of red triassic sandstone, S. Gregório, Algarve; E – Drystone wall made of Lower Jurassic basalt blocks, Almarjão, Algarve; F – Drystone wall made of Lower Jurassic dolomite blocks, Salir, Algarve; G – Drystone wall made of Upper Jurassic limestone blocks, Cerro de São Miguel, Algarve; H - Drystone wall made of middle Jurassic well layered limestone, settled on an outcropping limestone layer, Torre, Batalha, Portugal. All photos: Authors.

Unfortunately, a great part of the drystone walls is decaying due to the negligence of the owners. As they belong to the vernacular cultural heritage, which is still considered by many people as a “minor heritage”, there is little knowledge about their history and advantages, particularly at a local level. When this knowledge increases, major changes will rise, particularly in favour of their protection and appreciation (Gonçalves, Prates, & Rosendahl, 2018). For this reason, the authors proposed to highlight the local drystone walls in the emerging Geopark “*Terra Algarvensis*” in Southern Portugal. Consequently, a sense of belonging of the place, which identifies people and traditions, may be created, and the attitude of the public will enhance as people will recognize that the stone walls, as well as the geosites, are precious places worth to be estimated. These aspects are capable to improve the quality of life, particularly that of the local inhabitants (Rosendahl & Gonçalves, 2019).

Final Considerations

Stone wall terraces are an expression of the history and the culture of the local people and present environmental, social and economic benefits (Gonçalves, Pérez Cano, & Prates, 2020). The walls offer touristic opportunities: they may be included in geotouristical (or other) tours as it is planned by the authors, or workshops (how to build them, how to restore them, for instance) may be organised, contributing to their renewal and survival.

As the drystone walls represent an interface between geological and cultural heritage, and still have functions which are necessary for the landscape’s preservation, their protection and maintenance should take place in a similar way to a geosite.

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