

PRELIMINARY PROPOSAL FOR THE IDENTIFICATION OF PLACES OF DIDACTIC INTEREST IN PROTECTED NATURAL AREAS

Manuel Antonio Serrano de la Cruz Santos-Olmo, José Luis García Rayego & Óscar Jerez García

Protected Natural Areas (PNA) have consolidated a remarkable role in the dissemination of knowledge and geographic values over the last decades. From the beginning of the conservationist concern, in the mid-nineteenth century, the declaration of PNA has accomplished, in general, the objectives of establishing the basis to ensure a proper assessment and conservation of geodiversity, biodiversity and the various landscape manifestations. At the same time, an interest in dissemination has been developed little by little, helping to provide citizens a suitable knowledge of these natural values.

Therefore, PNA offer a remarkable educational interest which can be applied in any educational stage. In this context, Geography is favorably positioned because of the interests and needs of achieving an education based on sensitivity for diversity as well as on the ability to interpret complex spatial relationships. Consequently, PNA must be established as essential educational tools for environmental education and academic training of professionals linked to nature and territory.

The transmission of geographical knowledge has undergone a profound change in recent decades, during which the perspectives, objects and Geography learning problems have faced a necessary renewal. The mere transmission of scientific knowledge must be articulated together with the generation of certain attitudes that favor a comprehensive training of people (Graves, 1985). From this point of view, PNA have a number of values that are especially concentrated in its landscapes and its social implications. For geographic education, landscape analysis has stood out as one of its classic subjects of study (Benayas, 1992; Pena, 1997; Tonda y Sebastiá, 2000; Licerias, 2003 y 2013;

Serrano de la Cruz y Sánchez, 2007; García de la Vega, 2011; Castiglioni, 2012). Over time, attention has shifted from descriptive and visual aspects, to other issues such as sensitivity to ecological imbalances or certain public policies of threatened areas. This necessarily involves the promotion of certain values in citizenship (Souto, 2007, p. 29).

The didactic assessment is important, especially in relation to the curricular materials used as the textbooks or the supporting materials for teaching. The didactic assessment is rarer when referring to the territory itself represented by enclaves or landscapes in which educational action is benefited by the clarity and the representativeness of its components.

OBJECTIVES AND METHODS

The main objective of this contribution is to make an approach to the analysis of the didactic value of the components which integrate the PNA's landscapes. In order to achieve the main objective of the work, certain secondary objectives are also considered: (1) define the concept of "place of educational interest" (henceforth PDI); (2) provide the basis for making PDI inventories; (3) develop proposals for the design of educational itineraries linked to PDI inventories, and (4) produce a thematic digital cartography in which the above results remain collected, and capable of being used as teaching material or interactive complement during the prior preparation of activities in contact with nature.

The followed methodological criteria have been focused on the importance of teaching practice in field trip. These criteria have been articulated in four different phases represented by: (1) review and analysis mapping, regulatory and bibliographic materials of the studied PNA; (2) identification of major natural and cultural values and representative spaces for observation; (3) selection and classification of PDI, and (4) mapping and evaluation.

The first two phases have a documentary character mainly. Throughout them, the interpretation and synthesis of available documentation allows the recognition of the main values that have been considered for the space protection, as well as the detection and distinction of those enclaves where these values are particularly represented.

The third phase has mainly an applied nature. It deals with the identification, selection and classification of different PDI, considering these as singular places whose natural or cultural features are especially representative and easily perceived. Thus, an adequate and adapted pedagogical approach for a particular educational stage, allows an approach "in situ" to the understanding of its scientific and / or cultural values (Corvea, *et al.*, 2009). Four basic parameters have been considered for the selection of PDI: (a) representation; (b) good state of preservation of significant landscape components; (c) accessibility and (d) observing conditions. All of them are likely to be assessed quantitatively in later methodological phases.

A selection of the most relevant points is offered after the collection of information of the outlined elements analysis. Finally, a network of PDI is articulated, whose classification is based on geomorphology, fluvial, biogeographical, landscape and cultural criteria. This classification is complemented with a proposal of educational itineraries, exploitable in various educational levels.

Fourth and finally, the final phase of the process outlines a didactic assessment based on a qualitative relationship between the number and diversity of PDI which have been finally considered, and the organization of educational itineraries designed in relation to the greater or lesser presence of PDI and its access possibilities.

PRELIMINARY PRACTICAL APPLICATION IN THE ALCUDIA VALLEY AND SIERRA MADRONA NATURAL PARK (CIUDAD REAL)

A case study is applied in the Alcudia Valley and Sierra Madrona Natural Park. This PNA is one of the most representative of the Protected Areas Network of Castilla-La Mancha. Its main natural values are represented by the abundance, diversity, uniqueness and representativeness of points of geological and geomorphological interest of relevance at the regional level, as well as by the large areas covered by Mediterranean forests and holm oak and grassland. This space has also an extraordinary biological importance where species as the Iberian imperial eagle, black vulture, black stork and the Iberian lynx stand out.

Educational works on this PNA are not developed yet as a priority resource for teaching. However, there are interesting proposals of inventory and general assessment of different nature resources (Pérez, 2003; Luchena, et al., 2004; Carricondo, 2010; Gosálvez, 2009; Manzanares, 2010 o Cañizares, 2013). Most of them are supported by the work that has been developing for years the Alcudia Valley and Sierra Madrona Association for Sustainable Development (2015).

Places of Educational Interest Inventory

The bibliographic and cartographic analysis and the deep spatial knowledge of the studied area has made it possible to identify and differentiate numerous PDI that have been organized on an inventory basis composed of four main groups: those of geomorphological and fluvial interest, biogeographical, cultural and landscape.

According to the criteria, 86 PDI were initially selected and they have been georeferenced in the attached maps. Among them, we can highlight the presence of a large number of educational resources about landscape (27), geomorphological (21) and biogeographic character (18). To a lesser extent, but remarkable anyway, they include those of a cultural (14) and fluvial nature (7), which have been grouped with geomorphological mapping in the location.

Proposal for an educational itineraries network

Four routes that run through the network of national, regional and provincial roads of this territory articulate the proposal. All of them cover the three main sectors in which the Park can be divided. The four itineraries start from nearby areas that are not included in the definition of the PNA, but from which you can access to a set of PDI with a landscape character that allows a first approach to the interpretation of the western and central sectors of the Alcudia Valley.

This general approach can be qualified through the design of specific thematic itineraries. Certain places of educational interest can be prioritized according to teachers or educational interests expressed in the existing curricular needs. The wealth of places that compose the itinerary contains, however, the educational attractive to develop transverse exploitations, allowing a strengthening of the geographical perspective.

Didactic preliminary assessment

The recognition of a large number of PDI of wide range, as well as the possibility of planning and development of various proposals for educational tours associated with them, let give the Alcudia Valley and Sierra Madrona Natural Park a preliminary assessment of qualitative character from high to very high.

Firstly, because it has been detected an abundant number of places that meet the considered representative criteria, good conservation status, accessibility and good observing conditions. Furthermore, the high diversity degree of the recognized places, which includes spaces of remarkable landscape, geomorphological, biogeographic and cultural interest is added. This PNA thus becomes one of the best regional -and probably national- spaces to better understand the different aspects associated with natural Mediterranean forest distributed by the Appalachian Iberian reliefs. Likewise, this territory presents interesting and unique cultural contributions in relation to transhumance and traditional mining, which are reflected in landscape expressions with a marked character and strong features of territorial identity.

In addition, and secondly, a high valuation is estimated if we take into account the existence of different educational routes that are able to gather in a single tour numerous PDI of various types, which will also allow to establish independent thematic contents.