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THE RUPESTRIAN HERITAGE OF DJABAL NAFŪSA: A STUDY ON SETTLEMENTS AND ARCHITECTURAL FORMS

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Abstract

Djabal Nafūsa is the central portion of a horseshoe of mountains, about 600 meters high, which extends from the Maṭmāṭah region near Gabes in Tunisia to the coast not far from Misurata in Tripolitania. Human settlement of the Djabal Nafūsa has historically been associated with groups seeking refuge. The Berbers moved away from the invasions of the Arabs of the Banī Hilāl and Banī Sulaym in later mediaeval Islamic times, while the Jews escaped from Tripoli during the incursion of the Spanish in the XVI century. While Arabization has been widespread and the eastern region of Gharyan is now wholly Arab, the core of the Nafusa, namely Jadu, Iefrin and Nalut, forms a solid block of Berber villages and towns united by ties of language, religion and tradition. The region possesses two unique types of construction, the cave dwelling and the communal granary, both arising from the adaptation to climatic conditions and in response to the collective needs of the communities. The former type is known all over the district and was the common habitation of the Arab, Berber and Jewish communities. This article summarizes field research studies of subterranean Berber Settlements in this part Libya. The aim is to create an analytic sequence which starts from the territory and extends to architectural objects, so as to understand the relationships among the landscape, the history and the city formation.

Keywords: vernacular architecture, berber architecture, cave dwellings, rupestrian heritage, cave settlements.

Riassunto

Il Gebel Nefusa, talvolta definito col nome Eljabel Elgharbi ovvero "il monte occidentale", è un altopiano calcareo che si estende dalla provincia di Matmata in Tunisia fino alla città di Misurata in Libia. Questa porzione geografica presenta una notevole importanza dal punto di vista etnico e storico. Al suo interno, infatti, è ancora presente la cultura tradizionale dei berberi: i popoli autoctoni del Maghreb che furono confinati lungo i bordi dell'altopiano dalle invasioni delle tribù arabe provenienti da oriente. Benché situazioni analoghe possano trovarsi in diverse parti del nord Africa, in questa precisa area geografica il concetto di sostenibilità ambientale e di utilizzo razionale delle risorse pare assumere un senso emblematico. Due sono i tipi architettonici che meglio descrivono questa realtà tradizionale: i granai fortificati e le abitazioni rupestri. Queste ultime, nelle loro differenti qualità geometriche e formali, hanno costituito storicamente il modello di abitazione più comune per le popolazioni berbere, arabe, giudaiche. Il presente contributo riassume i risultati di una ricerca relativa al patrimonio rupestre della zona, proponendo una sequenza analitica che partendo dai singoli tipi architettonici procede fino all'estensione urbana e geografica.

Parole chiave: architettura vernacolare, architettura berbera, abitazioni sotterranee, insediamenti sotterranei, patrimonio rupestre.

Introduction

Djabal Nafūsa is a limestone escarpment running from the Libyan Mediterranean coast slightly to the W of the Tripolitanian town of al-Khums in a WSW direction to Nalut (Figs. 1 and 2). Thereafter the highlands break up as a set of lower tablelands lying on an axis oriented to the NW, eventually merging into the Monts des Ksour. The Djabal is an important and complex geological feature of North Africa. The N-facing scarp rises steeply from the flatlands of the Djifāra and is composed mainly of Mesozoic rocks within the Upper Triassic to Upper Cretaceous range. Altitudes vary from less than 500 m a.s.l. in the E to a maximum of 971 m a.s.l. above Gharyan, and to 725 m a.s.l. close to Kabaw further W. Elevations diminish gradually westwards towards Nalut (693 m a.s.l.). Human settlement of the Djabal Nafūsa has historically been associated with groups seeking refuge. The Berbers moved away from the invasions of the Arabs of the Banī Hilāl and Banī Sulaym in later mediaeval Islamic times, while the Jews escaped from Tripoli during the Spanish incursion in the XVI

century (McLACHLAN, 2005). The Nafūsa region is the most easterly Berber province of North Africa. While Arabization has been widespread and the E region of Gharyan is now wholly Arab, the core of the Nafūsa, namely Jadu, Iefrin Kabaw and Nalut, forms a solid block of Berber villages and towns united by ties of language, religion and tradition (NORRIS, 1953). Historical settlements are distributed on the dry, bordering valleys of the plateau (Fig. 3). The advantages of this configuration are twofold: on the one hand, the morphological characteristics of the mountains are a privileged spot from where to defend the territory against incursions from the N and the S, and on the other hand, by maintaining a strong link with the Sahara desert, so facilitating transport and trade. There is, moreover, another cultural reason that can explain the highest density of settlements on the border, since the Djabal Nafūsa is a mental border, the extreme edge of a region in which the oldest native communities have resisted the expansion of peoples coming from other parts of the Mediterranean area. It is a territory that has both protected

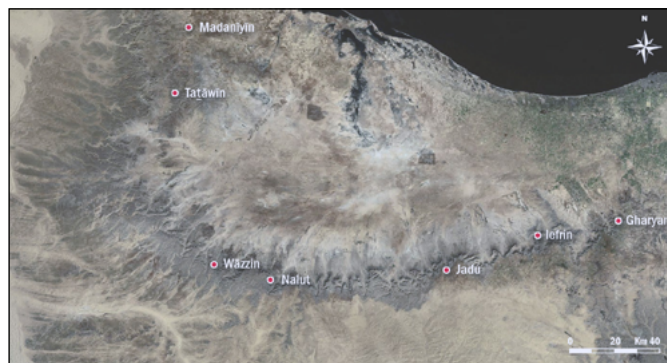


Fig.1: aerial view of the Djabal Nafūsa (IKONOS).
Fig.1: vista satellitare del Gebel Nefusa (IKONOS).

and defined a civilization, becoming a physical limit and a symbol of a particular social identity. This strong identity that influences the different examples of vernacular architecture arose from the adaptation to climatic conditions and in response to the collective needs of the communities. The region possesses two unique types of construction, the cave dwelling and the communal granary. The former is known all over the district and is the common habitation of the Arab, Berber and Jewish communities, although Gharyan in Tripolitania and Matmata in



Fig. 2: aerial view of the Djifāra plain.
Fig. 2: veduta aerea della pianura di Djifāra.



Fig. 3: the old city of Nalut.
Fig. 3: l'antico centro di Nalut.

Tunisia are the best-known localities. Caves were used historically for different functions: in the E area of the plateau they generally served for human habitation, while the above-ground buildings were restricted to store houses, schools and mosques (DELL'AQUILA et al. 2011) (Figs. 4 and 5). In the strictly Berber areas near Iefrin, Jadu, Kabaw and Nalut greater use was made of above-ground dwellings for habitation and of underground caves for mosques (ALLAN, 1972-73), olive presses (Fig. 6), stores, and libraries (Fig. 7). Two main factors are responsible: first, the harder rock and soil make the cave habitations smaller; secondly, density of population is far less in the W, and building stone more abundant.

Architectural forms and types

JEAN DESPOIS (1935) has subdivided the cave dwellings into four types according to their location and their historical evolution:

Horizontal: The primitive horizontal plan is found throughout the Djabal Nafūsa and in adjoining regions of Tunisia around Taḡāwīn. Houses are generally constructed along the slopes of mountains with horizontal geological stratifications of alternately hard and soft layers. This type has usually a horizontal design



Fig. 4: the Cave mosque of Tnumayat near Kabaw (photo F. Dell'Aquila).
Fig. 4: la moschea sotterranea di Tnumayat vicino Cabao (foto F. Dell'Aquila).



Fig. 5: interior of the mosque (photo F. Dell'Aquila).
Fig. 5: interno della Moschea (foto F. Dell'Aquila).



Fig. 7: interior of an underground Library in Kabaw.
Fig. 7: interno di una antica biblioteca a Cabao.



Fig. 6: an old oil press in Kabaw.
Fig. 6: un frantoio sotterraneo a Cabao.



Fig. 8: ground court type in Jadu.
Fig. 8: un esempio di abitazione rupestre a corte centrale a Giado.

and dates back to time when Berber sought secure and defensible shelter. This was a very primordial style of living, although the space was gradually improved, growing into citadels called Kalaa.

Grand court: This type is constituted by the subterranean dwellings in the hills (Fig. 8). These houses developed in regions with a hilly or rolling topography where the soil was uniform, facilitating excavation. The main design feature is a central rectangular or square patio surrounded by rooms that are generally long and narrow.

Pit in depth: The pit-in-depth is a cruder construction dug into harder rock or earth. These are frequently under modern houses and are used as cellars or for storing grain. Their original purpose was undoubtedly that of habitation. At Kabaw such pits under more recent habitations are olive presses.

Mixed habitation: This type, combining a cave dwelling with some other form of habitation, can be seen at Tigrinna in the Arab village below the Gasru. The plan is similar to grand court type but the pit may contain only two or three caves, one covered by a facade of stone walls and outhouses.

This typological classification allows us to create an

analytic sequence that starts from the architectural objects and extends to the territory. Although the process of modification of the original types has continued until today, it has determined new urban configurations in which groups of caves were converted and expanded to groups of houses or made into organized citadels.

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