

## Some zoogeographical aspects of the NW African vertebrate fauna in historical times: archeological and cultural historical methods in the research

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**ABSTRACT:** Author, after zoologically evaluating the Roman mosaics (2nd to 4th c. A.D.) from NW Africa, points out the details of zoogeographical changes, like the extinction of numerous Afrotropical elements, e.g. large mammals and the ostrich, having taken place in historical times.

The fact that a great number of animal species has already become extinct in historical times a regrettable process continuing even today, urges the specialists to go beyond the biogeographical investigations of the present state studying the dispersion of a single species of animal. It seems to be beyond doubt that areas, where the changes in the ecosystem proceeded relatively rapidly: where natural changes as well as social ones increased the dynamics of the process in faunal changing, need a special investigation.

### Results

The most critical area in the Old World is the Mediterranean, where three continents: Europe, Africa and Asia meet. Since a methodical collecting of the fauna of this area has not begun sooner than the 18th century, while the conservation and scientific investigation of the animal remains (bones, etc.), uncovered by archeological excavations, has a past of barely half a century, research work must employ other methods than merely zoological ones. Among these zoo-archeology is perhaps the most important one dealing with the examination of animal representations, preserved on archeological monuments. In this respect the investigation of prehistoric animal representation on NW African rock engravings had some significant results in outlining the faunal history of this area (LOTHE, 1966, 1971; further references at NISSEN, 1971). Though the monuments of classical antiquity were also subject of a scrutiny in the course of the last 90 years (KELLER, 1887, 1909-1913; recently TOYNBEE, 1973), a synthetic, complex elaboration of the problem is still lacking. Especially for the NW African fauna of classical times, there are first of all the contemporary illustrations which in lack of a suitable osteological material may give a reply. Which were those characteristic vertebrates of the NW African area, more precisely of the African "Mediterranean Sclerophyll" and the "Atlas Steppe" (UDVARDY, 1975), which became already extinct in the first half of the first millenary A.D.? I should like to refer here, since it con-

stitutes a preliminary study of a more extensive monograph, only to a few mosaics illustrating a hunting of the local fauna, based particularly on LAVIN's work (1963) and some other publications (YACUB, 1970; FÉVRIER, 1971). I believe that these alone may clearly prove the changes having taken place in historical times, compared against the latest data concerning the diffusion of the big games of this region (HALTENORTH-TRENSE, 1975).

#### MAMMALIA:

##### Panthera leo L.

Caesarea-Cherchel (Algeria), Cuicul-Djemila (Algeria), Cirta-Constantine (Algeria), Hippo Regius-Hippone (Algeria), Carthago-Carthage (Tunisia), Khéreddine (Tunisia).

##### Panthera pardus L.

Caesarea-Cherchel (Algeria), Cuicul-Djemila (Algeria), Hippo Regius-Hippone (Algeria), Orléansville (Algeria), Thuburbo Majus Henchir Kasbat (Tunisia), Thysdrus-El Djem (Tunisia).

##### Ursus arctos crowtheri SCHINZ L.

Carthago-Carthage (Tunisia), Khanguet el Hadjal (Tunisia).

##### Loxodonta africana BLB

Carthago-Carthage (Tunisia), Thysdrus-El Djem (Tunisia).

##### Equus (Asinus) asinus somalicus L.

Caesarea-Cherchel (Algeria), Hippo Regius-Hippone (Algeria), Henchir-Toungar (Tunisia), Thuburbo Majus-Henchir Kasbat (Tunisia).

##### Sus scrofa L.

Cuicul-Djemila (Algeria), Orléansville (Algeria), Cincari-Henchir-Toungar (Tunisia), Hadrumetum-Sousse (Tunisia), Carthago-Carthage (Tunisia), Uthina-Udna (Tunisia), Khéreddine (Tunisia), Thysdrus-El Djem (Tunisia).

##### Cervus elaphus barbarus L.

Caesarea-Cherchel (Algeria), Cuicul-Djemila (Algeria)?, Le Kef (Tunisia)?

##### Oryx beisa L.

Hippo Regius-Hippone (Algeria)

##### Alcelaphus buselaphus L.

Hippo Regius-Hippone (Algeria)

##### Bubalus (Syncerus) caffer L.

Caesarea-Cherchel (Algeria), Carthago-Carthage (Tunisia)?, Thysdrus-El Djem (Tunisia)

##### Capra ibex L.

Carthago-Carthage (Tunisia)

#### AVES:

##### Struthio camelus L.

Hippo Regius-Hippone (Algeria), Le Kef (Tunisia).

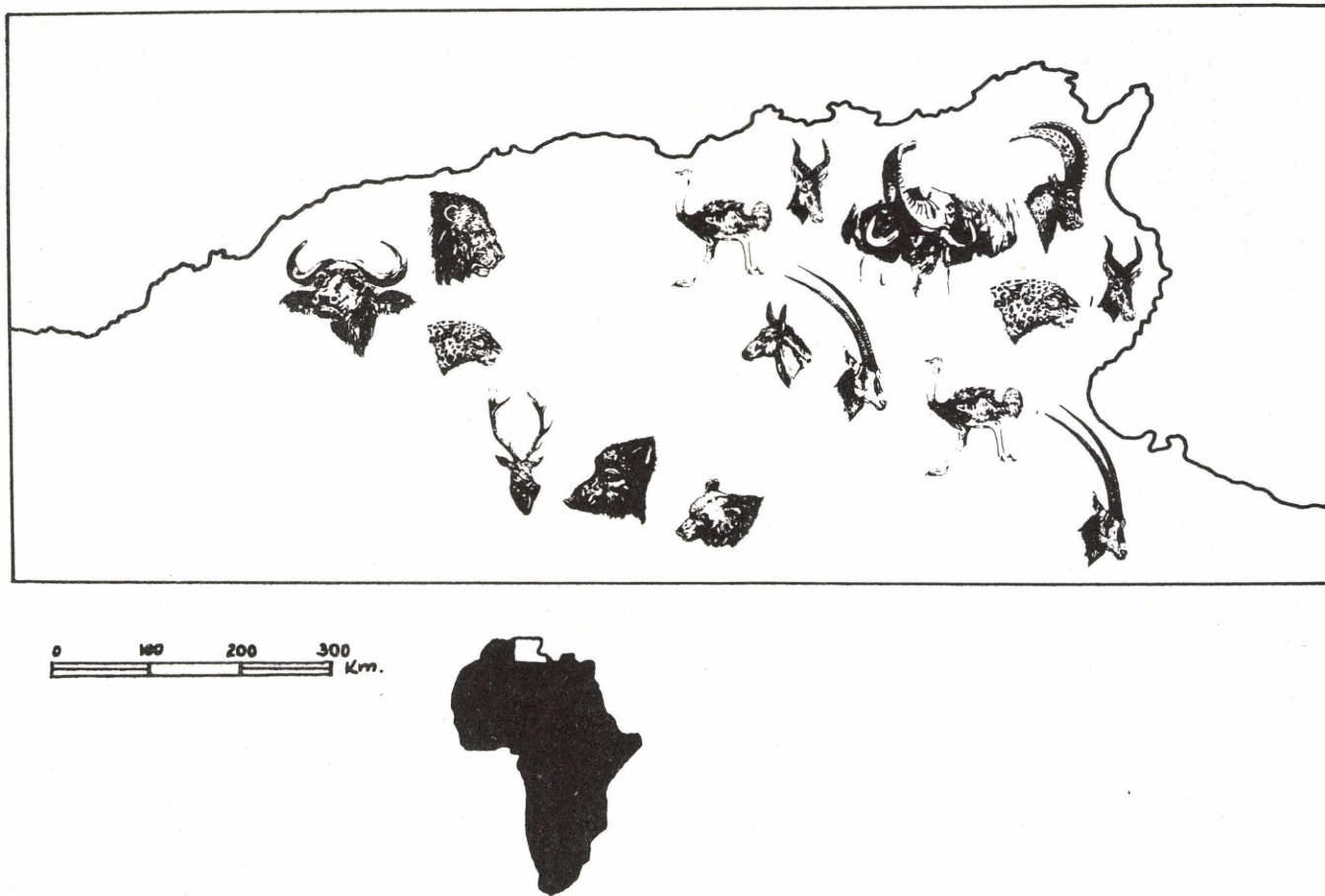


Fig. 1. Characteristic vertebrates of NW Africa according to hunting mosaics from the 2nd to 4th century, extinct after the Antiquity (designed by GY. SIPOS)



Classical authors also gave evidence of the diffusion of the vertebrates enumerated above (Fig. 1). Among the authors, it is Plinius Maior (A.D. 79), who mentioned them several times in his work ("Naturalis historia"). Plinius based his information on the work "Peri Libyés syngammata" by Iuba II, the scholar king of Numidia. From the rich data of Plinius, this time we can refer to those only, which specify relatively precisely the locality of the particular species. Speaking of the African elephant, he mentioned that they were to be found "ultra Syricas Solitudines et in Mauretania" (N.H. VIII. §. 32 ed. MAYHOFF, 1906-1909) furthermore, in the steppe near the town Sala (today Wed Bu Raggar: N. H. V. §.), as well as in the vicinity of the river Ger in Mauretania. Plinius wrote also about the bear of Numidia (N.H. VIII. §. 131), which in all probability must be the Ursus arctos crowtheri (SCHINZ). Referring to other classical authors, he gave interesting data on the struggle, which the army of the Roman leader Regulus had with a python (in the period of the Punic wars) (N.H. VIII. §. 37). No Roman representation on the hunting of this species of pythons, which according to GOSSEN-STEIER (1923) must have been the assale (Python sebae GM), but on a mosaic with a hunting scene, found recently near Carthago - which was exposed also in Budapest (SZABÓ, 1973, cfr. SALAMONSON-ENNAIFER, 1973 "Mosaiques", a python struggling with an African elephant, is represented.

Plinius gave also remarkable data on the drought-resistance (xerophily) of the oryx: "Orygem perpetuo sitentia Africae generant ex natura loci potu carentem et mirabili modo ad remedia sitentium: namque Gaetuli (ancestors of the today's Tuaregs, Z.K.) latrones eo durant auxilio, repartis aperto corpora eorum saluberrimi liquoria vesicis" (N.H. VIII. §. 131).

The map displaying the occurrence of big game represented on the above-mentioned monuments and the classical authors attest that though the fauna of the Atlas area still shows a mixture of faunal elements typically circum-Mediterranean (i.e. of European character), and those of Ethiopian features, the number of Ethiopian (Afrotropical: UDWARDY, 1975) faunal elements of a savannah character must have been, according to our investigations, relatively much larger in the Roman imperial period, even as late as the 3rd and 4th century, than in our days.

These data, selected at random, indicate that in historical times (most likely after the 7th century A.D.) the southern faunal elements had a much more significant role in the Mediterranean area than in our times. Since an areal regression of the vertebrates on a wide scale must have taken place.

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