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MAURO GRANO

THE CRETAN HOUND AND THE KARPATHIAN HOUND:
TWO BREEDS COMPARED.
HISTORICAL, MORPHOLOGICAL
AND OSTEOLOGICAL CONSIDERATIONS

SUMMARY

The discovery on the island of Karpathos of old dog bones with compatible features with those of a hunting dog, led me to believe that these remains could belong to the endemic Karpathian dog. The morphological comparison between the Karpathian and the Cretan dogs, both specialized in hare hunting, further highlighted that the Karpathos dog is an endemic breed of Karpathos Island well differentiated from its Cretan congener.

Keywords: Karpathos, Crete, Karpathian hound, Cretan hound, hare hunting.

RIASSUNTO

Il Cretan hound e il Karpathian hound: due razze a confronto. Considerazioni storiche, morfologiche e osteologiche. La scoperta sull'isola di Karpathos di antichi reperti ossei di cane con caratteristiche compatibili con quelle di un cane da caccia, ha portato ad ipotizzare che questi resti potessero appartenere al cane endemico di Karpathos. Il confronto morfologico tra i cani di Karpathos e di Creta, entrambi specializzati nella caccia alla lepre, ha ulteriormente evidenziato che il cane di Karpathos è una razza endemica dell'isola ben differenziata dal suo congenere cretese.

Parole chiave: Karpathos, Creta, Karpathian hound, Cretan hound, caccia alla lepre.

INTRODUCTION

The Karpathian dog was a native species in Karpathos which has been exterminated during the last century for several reasons, finally disappearing from the island in 1954 following an order for elimination by the Hellenic

Gendarmerie. The characteristics of the Karpathian dog are very similar to those of the dog of the nearby island of Crete, but unfortunately little is known of its history. Both specialize in hare hunting, a mammalian species present both in Crete and Karpathos. Among the numerous dog breeds, many were selected by man as a hunting aid. The hunting dogs are usually medium sized very nimble and fast. In Greece one of the best known and oldest hunting dog breeds is that of Crete. The Cretan hound is a product of its environment. This means this dog is especially well adapted to rocky mountainous terrain (the island of Crete is characterized by very high mountain ranges that cross its length from east to west). It has traditionally been used to hunt wild goat and particularly wild hare. Not many dogs are capable of hunting in such a steep and craggy environment, but the Cretan hound can do it very efficiently (KOSMOPOULOS & GENIATAKIS, 2013).

Genetic, morphological, and behavioral studies suggest that the thousands of domestic dog forms in the world derive from the gray wolf *Canis lupus*. Today most dogs share little resemblance to their lupine ancestors. As a result of artificial selection, dogs radiated to fill niches in our lives, becoming our herders, guardians, hunters, rescuers, and companions (WILCOX & WALKOWICZ, 1995). Molecular clock estimates from mitochondrial DNA suggest domestication started as early as 135,000 years ago (VILÀ *et al.*, 1997). More conservative estimates are based on archaeological records, which indicate that dog domestication began somewhere between 15,000 and 36,000 years ago (LARSON *et al.*, 2012). Current archaeological estimates depend on carbon dating of bones, whose morphologies appear distinct from those of contemporary wolves. In many cases, these distinctions are pronounced in both the skull and dentition. This suggests that, among incipient dogs, the skull was at the leading edge of several anatomical changes that would transform wolves (SCHOENEBECK & OSTRANDER, 2013).

MATERIALS AND METHODS

During naturalistic researches carried out on Karpathos between 28 July to 17 August 2019, the author found old bones remains belonging to a medium-sized dog, in a small cave hidden between the rock walls in the area of the Flaskia Gorge, on the west coast of the island. Coordinates are 35°33'48,94"N, 27°06'44,01"E, and 213 m a.s.l. The skull is attributable to a mesocephalic dog (having a medium sized head, not markedly brachycephalic or dolichocephalic). The measurements are: total length: 153.5 mm; palatal length: 80.0 mm; skull base: 145.0 mm; skull width: 92.5 mm; skull height: 74.1 mm. The humerus (Fig. 1) shows the hole "supra-trochlear foramen" that runs through the articulation and measures 112.0 mm in length. Bones measurements were



Fig. 1 — Humerus of the Karpathian dog.

performed with a caliper of 1/100 mm precision. Fieldwork was performed according to international standards and the conditions described in the Presidential Decree PD 67, 23//30181 for field research in Greece.

RESULTS

The unusual discovery of these ancient dog bones with morphological features compatible with those of a hunting dog and the area of the finding, very far from the inhabited centres and difficult to reach, suggested that these remains could belong to a specimen of the endemic hunting dog of the island of Karpathos. Therefore, a comparison with the hunting dog of the nearby island of Crete was made, since this dog shows notable similarities to that of Karpathos, both from an anatomical and morphological point of view.

The Cretan hound

This dog originated in Crete 4,000 years ago. It is the most ancient hunting breed of Europe. It is a hunting type dog, slender but strong physique,

short coated, with erect ears, curled tail or curled it up forming a semicircle. This dog is active, bright, alert, agile and flexible in movement, with a good scent and with physical endurance. It is excellent in hunting hare and wild rabbit, usually alone or in pairs and is suitable for all terrains, even in the most rocky and steep areas and hard to reach. The pursuit of the prey is fast but not persistent. Its voice is not loud, it is heard mostly while hunting the hare (MPASOURAKOS, 1995). The Cretan hound can range in color from creamy white to golden, brindle, black and light brown. It tends to have erected pointed ears, a dolichocephalic head shape, and highly developed toes and foot pads that help them expertly tread the mountainous landscape (KOSMOPOULOS & GENIATAKIS, 2013). The head is long (dolichocephalic), wedge-shaped. Total length reaches 39% of the height at withers. It is longer than the muzzle and it corresponds to 54.5% of the total length of the head, while the length of the muzzle corresponds to 45.5%. The zygomatic width of the skull is about 47.5% and, in any case, it should be smaller than half of the total length of the head, that is, the total cephalic indicator should be under 50. The upper lines of the skull and muzzle (cranio-facial axes) are almost parallel. The cranial region is round shaped, flat on the upper surface and slightly compressed at the sides. It is longer than the muzzle, as 12 is to 10, that is, the length of skull is about 54.5% of the total length of the head. Occipital hypophysis is slightly prominent, stop is wide, a bit shallow and a bit defined (MPASOURAKOS, 1995).

The Karpathian hound

Unfortunately, very little is known about this dog. The only iconographic source is a photo of the 80s by the French François Le Diascorn. All the elderly hunters interviewed by me reported that the Karpathian endemic dog was of medium size, with small ears, a medium length semicircular tail, and a black or brown color. The Karpathian dog was surely a highly specialized in the hare hunting and certainly had a very unlucky history. During the Italian occupation of the Aegean Islands (1912-1945), in 1923 the Italian government imposed a census of these hunting dogs and imposed a heavy tax on their owners. By prohibiting hunting (only for the natives of Karpathos), the Italian government made it possible the detainment of the owners of these dogs for illegal detention. Furthermore, in 1954 the Karpathos gendarmerie proceeded to the mass extermination of these dogs and the then head of the hunters' association, Nikos Nikolaidis, raised reasonable questions about the unjustified killing and asked for the publication of the reasons that led to the executions. No official response was provided, only many years later it was said that the reason was due to canine rabies disease.

CONCLUSION

The comparison between the skull of the Cretan dog (Fig. 2) and that one of the Karpathian dog (Fig. 3), has allowed highlighting some remarkable



Fig. 2 — Skull of the Cretan dog. After *Kosmopoulos & Geniatakis (2013)*, modified.



Fig. 3 — Skull of the Karpathian dog.

similarities but also some important differences. From a morphological point of view both dogs are similar in size, tail and general appearance. These characteristics, however, are typical of many hunting dogs' breeds. The color of the Cretan dog is often pale and sometimes white, while in the Karpathos dog it is always brown or black. The most significant differences are the osteological ones. *Norma ventralis*: the Cretan hound has a dolichocephalic skull, while the Karpathian hound has a mesocephalic skull; the tympanic bullae of the Karpathian dog are significantly larger and different in shape than those one of the Cretan dog; the occipital condyles and the zygomatic bones are completely different in shape in the two dogs; the position of the foramen magnum is also very different. *Norma dorsalis*: the frontal and parietal bones are totally different in shape, size and proportion. *Norma lateralis*: the frontal and parietal zones are significantly different in shape and proportion; the stop is slightly accentuated and the squamosal are more elongated in the skull of the Karpathian dog. In light of these morpho-anatomical differences, it can suggest that the two dog breeds, although having similar characteristics from a morphological point of view, they belong to two distinct entities. Currently in Karpathos this breed is no longer present, and the hunting dogs that live in Karpathos may be attributable to the breed of Crete (Fig. 4).



Fig. 4 — Hunter dog in Olympos, Karpathos Is.

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Address of the author — M. GRANO, Via Valcenischia, 24 - 00141 Rome (I); e-mail: elaphe58@yahoo.it

