

THE LATE PLEISTOCENE PRIMITIVE DOG (*Canis volgensis*) AND GOAT (*Capra dzudzuana*) OF THE WESTERN TRANSCAUCASIA

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Summary

In this work, we describe Pleistocene forms of wild dog and ibex of the Western Transcaucasia, which are the direct ancestors of the domestic dog and of the Caucasian goat. We examine their morphology and systematical position as well as their geographical distribution.

Résumé

Le chien sauvage (Canis volgensis) et la chèvre (Capra dzudzuana) du Pléistocène final de Transcaucasie occidentale.

Dans ce travail, nous décrivons les formes pléistocènes d'un canidé et d'un bouquetin sauvages de Transcaucasie occidentale; ces formes sont les ancêtres directs du chien domestique et de la chèvre du Caucase. Nous examinons leur morphologie et leur position systématique, ainsi que leur distribution géographique.

Zusammenfassung

Wildhund (Canis volgensis) und Steinbock (Capra dzudzuana) im Spätpleistozän des westlichen Transkaukasien.

In diesem Beitrag werden die pleistozänen Formen des Wildhundes (*Canis volgensis*) und des Steinbockes (*Capra dzudzuana*), direkte Vorfahren von Haushund und Caucasus-Ziege, beschrieben. Untersucht werden ihre systematische Stellung, ihre Morphologie und ihre Verbreitung.

Key Words

Subfossil mammals, Dog, Goats, Late Pleistocene, Morphology, Systematics, Zoogeography, Transcaucasus.

Mots clés

Mammifères sub-fossiles, Chien, Chèvres, Pléistocène final, Morphologie, Systématique, Zoogéographie, Transcaucasie.

Schlüsselworte

Subfossile Säugetiere (Hund, Ziege), Spätpleistozän, Morphologie, Systematik, Zoogeographie, Transkaukasus.

At present it may be proved that the domestic dog originated from a species of the pleistocene dog, *Canis volgensis* (Volk, 1985). This species was identified by M. Pavlov (1930-1931) on the basis of material from Late Pleistocene deposits of the middle Volga river basin.

A few years ago, the remains of a similar or identical dog species were first found in the Palaeolithic kitchen garbage at Kholodny Cave, then in a bone collection gathered by workers of the Sukhumi Museum and one more time at Pskhu Cave.

Among the finds from Kholodny Cave, there is firstly a fragment of the rear section of the mandible of a small-size dog. The shape of the lower teeth almost does not differ from the one of the domestic dog. This is especially visible at the second molar: as compared with the wolf (*Canis lupus*), its talonid is much shortened and its rear-inside edge

is semi-circular. The size and the M₂ structure make this mandible nearer to the domestic dog than the wolf.

Originating from the same deposits than the lower mandible, a proximal fragment of ulna is quite similar by size and general shape to the one of a middle-size domestic dog. The two only slight differences between them are related to the position of two processes of the dorsal edge of the elbow *tuberositas*, closer to each other at the fossil specimen, and to the lateral process which is pushed forward and bent to the medial side. However, the shape of the elbow bone from Kholodny Cave does not go beyond the usual limits of the variability of domestic dogs, for example the great Dane.

The mandible from the Pskhu Cave belongs to a larger specimen, which size approaches the large Caucasian sheep dog. The shape of this mandible is typical of domestic dog

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mandibles. In particular, it shows a relative shortening (without any diastema) of all premolars and a strong overlapping of the fourth premolar, almost one quarter of its crown length stretching outside the first molar. These two characters are generally not observed on recent wolf mandibles.

Altogether, these observations confirm that a certain species of wild dog, may be *Canis volgensis* or its subspecies, existed during the Late Palaeolithic in Western Transcaucasia. This dog appears to be a wild ancestor of aboriginal Caucasian domestic dogs.

Until recent times, the remains of the Caucasian goats from the Pleistocene deposits were considered belonging to modern subspecies. However, in 1990, we described a new species of fossil goat, *Capra dzudzuana* Bendukidze, from a piece of frontal bone with the horn basis found in the Late Palaeolithic layers of the Dzudzuanna Cave (Imeretia). The goat from Dzudzuanna differs from the recent subspecies first of all by the very large and massive structure of horncores. They are slightly-bent arched, and the cross-section is lens shaped (but no triangle like the ones of the recent Caucasian goats) and not folded, which is typical of recent Caucasian goats. The general shape is similar to the ones of horncores of Middle East goats; however, they differ from the latter by a cross section more convex outside and less convex inside. In this respect, they appear to be more similar to the alpine ibex horncores. However, they differ from the latter because they are much less bent and because they do not sharply taper towards the top.

The shape of the forehead (with a strongly developed interhorn torus, calvarium, *condyli occipitalis*, *foramen magnum* and basilar section of the cranium) of *C. dzuzuana* is very similar to the one of recent Caucasian goats. On the base of these observations, we proposed to refer this goat to the subgenus of the Caucasian goat. We observed small dif-

ferences with reference to recent Caucasian goats: it is larger (if judged by the brain capsula from Novi Afon Cave), the skull is slightly more elongated (it is, for example, wide and shorter in *Capra cylindricornis*) and the reliefs, the cranial bones and the horncores are more massive.

We also may refer to the Dzudzuanna species a cranium, the horncores of which are well preserved and which originates from Kudaro III Cave, first determined as *Carpa* cf. *priscus* (Verestchagin and Barishnikov, 1980): the shape and cross section of the horncores as well as the presence of a massive interhorn torus typical of the Caucasian goats, confirm the reference to *C. dzudzuana*.

Generally speaking, *C. dzudzuana* represents a primitive ibex-shaped form of the Caucasian goats which inhabited during the Pleistocene all the Caucasus (as far as we can judge by the wide-spread remains), including the mountain systems of the Lesser Caucasus where it existed up to the historical Period (finds in the cultural layers).

In connection, arise the problems of the date of the origin of recent Caucasian goats (with folded horns and triangle cross sections) and of the geographical relationships with *C. dzudzuana*. According to our data, the remains of Caucasian goats with modern horn types were so far observed in the Great Caucasus only in relatively late layers, not earlier than the Late Holocene (material of *C. cylindricornis* from the Zhinvaly excavations). We do not know any earlier fossil horncores of similar types. Therefore the problem of the date of the origin of the recent Caucasian goat, in a sense, remains open.

We consider that, at the beginning of the Holocene, *C. dzudzuana* was pushed away from the Great Caucasus by Holocene species which had originated by that time. However, it went on inhabiting the Lesser Caucasus till the Late Medieval times, when it then begun extincted by human beings.

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