

## Late Miocene *Cervavitus novorossiae* (Cervidae, Artiodactyla) from Lantian, Shaanxi Province

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**Abstract** Deer fossils from the basal of the Lantian Formation are described and assigned to *Cervavitus novorossiae* by their medium size, three-tined antlers, curved beams, pedicles prolonged by a ridge on the frontals, the long span between the burr and first fork in young individuals, long and curved brow tine with laterally flattened fork etc. Overview of the pliocervines from China confirms that five species of *Cervavitus* existed in China: *C. novorossiae*, *C. shanxius*, *C. huadeensis*, *C. ultimus*, and *C. fenqii*. New biochronological data and comparative study suggest the possible origination of *Cervavitus* in East Europe, and it migrated to China from the beginning of Baode age. The differences of *C. novorossiae* from *C. shanxius* show that *C. novorossiae* might evolve into the latter in order to adapt to local climatic and ecological changes. From Pliocene on, the East Asian winter monsoon intensified, and there are much less records of *Cervavitus* and no records from Pleistocene in North China. While South China, much less affected by the winter monsoon, may be the last refuge of this genus.

**Key words** Lantian, Shaanxi Province; Late Miocene; *Cervavitus*, pliocervine; migration event

The living deer family Cervidae is the most diverse of Artiodactyla after Bovidae. It is characterized by having bony cranial appendages covered by soft tissues. The protoantlers were the early forms represented on Lagomerycidae and Dicrocerini during the Early-Middle Miocene. The cranial appendages of *Euprox* are true antlers with the first recognizable modern burr indicating the border between deciduous and permanent parts (Gentry et al., 1999). From the onset of the Late Miocene, more obviously advanced antlers towards later antlered deer appeared. Not only the size increase, but also the dichotomous antler with more or less equal prongs gradually changed into a main branch with a smaller anterior branch or tine and then an increasing number of distal tines (Gentry et al., 1999).

Khomenko (1913) named the subfamily Pliocervinae based on antler remains from the village of Tarakliya (Moldova). He described three new genera with one species for each genus into Pliocervinae: *Cervavitus tarakliensis*, *Cervocerus novorossiae*, and *Damacerus bessarabiae*. However, their validity and higher level attribution raised much dispute afterwards.

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Zdansky (1925) considered *Damacerus bessarabiae* as a junior synonym of *Cervocerus novorossiae*, and *Cervavitus tarakliensis* as a valid genus and species. Teilhard de Chardin and Trassaert (1937) referred the fossil deer remains from China (Yushe Basin, Shanxi) to *Cervocerus novorossiae* with its peculiarity of lacking the *Palaeomeryx*-fold, but did not agree with Zdansky (1925) in considering *Damacerus* to be an invalid genus.

Considering of the three species named by Khomenko as different ontogenetic stages of the same genus and species, Flerov (1962), Czyzewska (1968), Vislobokova (1990) listed *Cervavitus* as a valid genus, and *Provcervus variabilis* Alexeev, 1913 as the type species of *Cervavitus* which is published by Alexeev (1913) prior to Khomenko (1913). After restudied the collection described by Khomenko, Petronio et al. (2007) agreed with their opinion and further referred all the specimens named as *Cervavitus novorossiae* from China to *C. shanxius*, and hypothesized two migration events from China to Europe during the late Middle Miocene and the Early Pliocene respectively. Dong (2011) considered that *Cervavitus* should be originated in the Moldovan forests of East Europe in the late Vallesian (MN10) from an ancestor with brachyodont teeth, holometacarpal, two/three-tined antlers, and *Palaeomeryx*-fold on lower molars, which evolved into *C. novorossiae*. It dispersed into northern China forests in the early Turolian and represented by *C. shanxius*.

Though there have found large quantity of specimens from many localities of North China, the evolutionary history of this group of animals is still unclear and in dispute.

From 1997 to 2011, the Finnish-Chinese Lantian field project found some well preserved materials preliminarily referred to *Cervavitus novorossiae* from localities of the Lantian Formation (Zhang et al., 2002). In this paper we will describe these fossils and try to give an overview of other Pliocervini from China based on new materials and new biochronological data.

## 1 Geological background

The continuous Late Miocene sedimentary deposition in the Lantian area, Shaanxi Province, China has produced a substantial collection of mammalian fossils and has been studied since 1960 (Liu et al., 1960, 1978; Chow, 1978; Zhang et al., 2002, 2013). This area is located north of the Qinling Mountains, in the southeastern part of the Weihe Graben. The Finnish-Chinese Lantian field project started in 1997, and found 26 fossil vertebrate localities (Zhang et al., 2002). Among the most productive localities, two are in the lowermost part of the Lantian Formation (Localities 42 and 44), and their estimated age is 6.6 Ma by paleomagnetic correlation (Zhang et al., 2013). The fossil assemblage from Locality 42, combines catastrophic mortality in a mass-flow event with reworked skeletal elements from the land surface and older deposits (Andersson and Kaakinen, 2004), includes remains of *Prosiphneus licenti*, *Typhlomys* sp., *Adcrocuta eximia*, *Ictitherium viverrinum*, *Hyaenictitherium* cf. *H. wongii*, *Gazella paotehensis*, *Palaeotragus microdon*, *Microstonyx major*, *Chleuastochoerus stehlini*, *Hipparion coelophyes*, *Acerorhinus palaeosinensis*, *Chilotherium habereri*, and *Cervavitus*

*novorossiae* (Zhang et al., 2013).

## 2 Systematic paleontology

### Artiodactyla Owen, 1848

### Cervidae Goldfuss, 1820

### Cervinae Goldfuss, 1820

### *Cervavitus* Khomenko, 1913

### *Cervavitus novorossiae* (Khomenko, 1913)

(Figs. 1-3; Tables 1-2)

**Revised diagnosis** Medium sized deer with three-tined antlers. Pedicles are prolonged by a ridge on the frontals. The span between the burr and the first fork is long in young individuals but short in adults. The brow tine is long and curved, and the fork is always laterally flattened. The beam is curved and lyre shaped. The p4 has expanded metaconid but not enclosing the valleys.

**Specimens** A pair of nearly complete antlers with part of frontal and parietal bones (IVPP V 18760.1 and V 18760.2); a partial skull with part of frontal and parietal bones, left antler and proximal part of right pedicle (V 18760.3); 2 antler crowns with the distal parts of main beam lost (V 18760.4-5); 6 left and 9 right lower jaw fragments with teeth (V 18760.6-20); 2 right and 2 left maxillary fragments with teeth (V 18760.21-24).

**Locality** LT. 42, basal of the Lantian Formation dated to 6.6 Ma (Zhang et al., 2013), Lantian County, Shaanxi Province, China.

**Measurements** The tooth measurements see Tables 1-2.

**Description** IVPP V 18760.1-3 (Fig. 1G, J, K) are skull fragments with almost completely preserved antlers. The breadth of the frontal bone between the interior proximal

**Table 1** Measurements (length×width) of upper cheek teeth of *Cervavitus novorossiae* from Lantian (mm)

IVPP No.	P2	P3	P4	M1	M2	M3
V 18760.21	11.2×12.4	10.5×13.2	10.1×13.5	12.6×15.9	15.3×17.9	16.6×18.1
V 18760.22			10.2×13.5	12.1×15.8	14.6×18.5	15.1×18.2
V 18760.23			—×14.1	13.1×16.4	15.5×18.3	16.4×18.4
V 18760.24		10.7×12.5	13×14.8 (dp4)	15.6×17.5	17.4×18.5	

**Table 2** Measurements (length) of lower cheek teeth of *Cervavitus novorossiae* from Lantian (mm)

IVPP No.	p2	p3	p4	m1	m2	m3	Lpm	Lm
V 18760.6	9.4	11.2	12.8	12.5	15.2	19.6	33	47
V 18760.7		12.7	12.7	14.1	17.1	23.9		53
V 18760.8		13.3	12.3	14.5	16.1	19.9		49.5
V 18760.9			12.7	14.1	16	21.3		51.4
V 18760.13			12.5	14.6	16.3	21.7		52.8
V 18760.14	10	13.5	12.7	14.5	16.1	19.7	36.9	49.8
V 18760.16	9.3	12.3	12.6	14.4	16.4	22.6	33.1	53
V 18760.20				14.5	15.8	20.2		49.4

Abbreviations: Lpm. length of p2-p4; Lm. length of m1-m3.

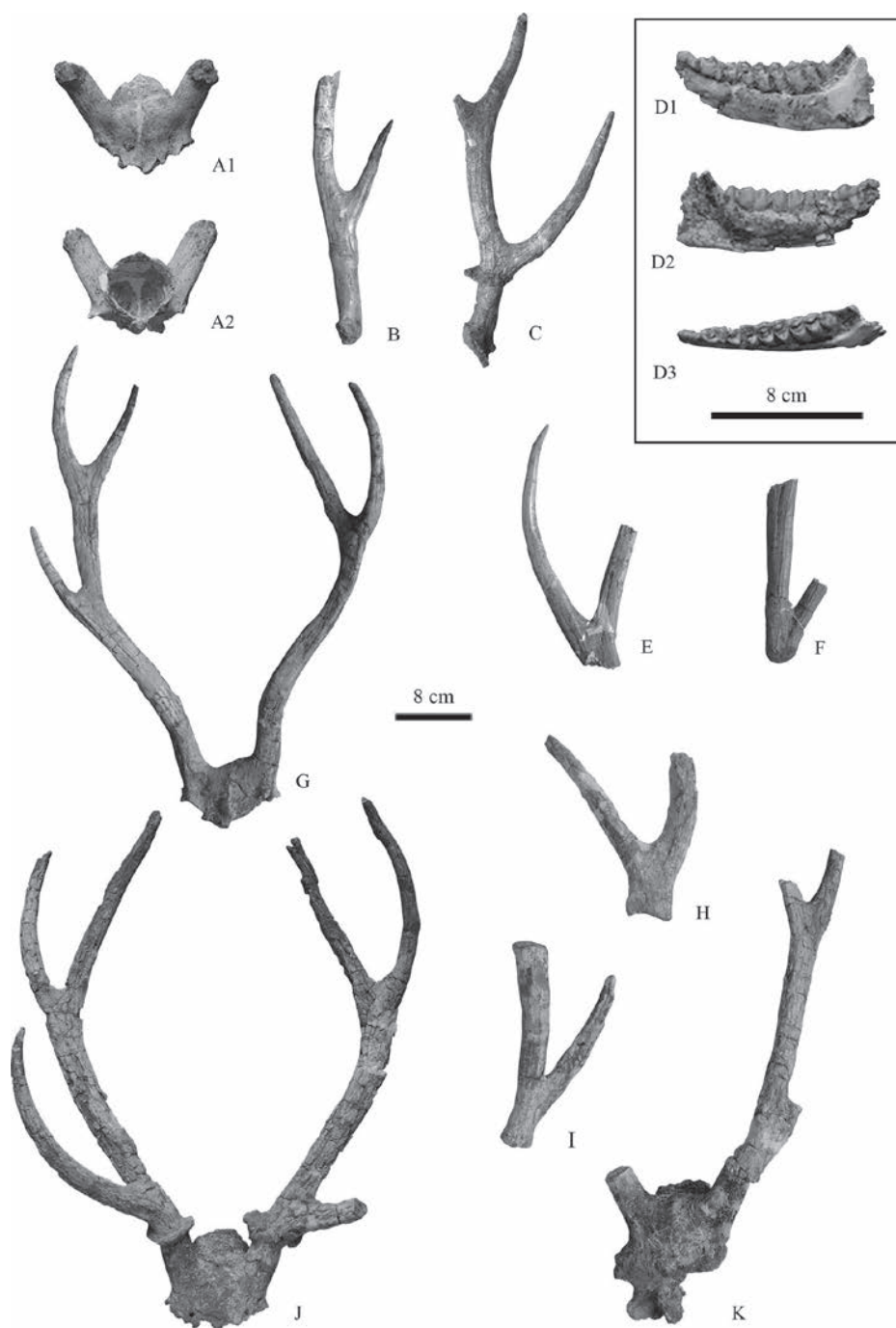


Fig. 1 *Cervavitus novorossiae* from the Lantian Formation

- A. IVPP V 3143, a skull fragment with parts of frontal and parietal bones, A1. dorsal view, A2. posterior view;  
 B-C. V 3147, left antler; D. V 3138, left lower dentition with p3-m3, D1. labial view, D2. lingual view,  
 D3. occlusal view; E-F. V 3143, antler fragment; G. V 18760.3, a skull fragment with complete antlers;  
 H-I. V 18760.4-5, antler fragment; J. V 18760.1, a skull fragment with complete antlers;  
 K. V 18760.2, a skull fragment with nearly complete left antler

parts of the pedicles is 50, 42 and 52 mm respectively.

V 18760.1 has three tines on each side, developed burr, and light development of crest between the pedicle and orbit. The length of pedicle is 36 mm and the diameter is 30 mm. The brow tine is relatively long and curved, positioned low and close to the burr. The length of brow tine is 200 mm, and the distance between the burr and brow tine is 20 mm. The angle between the brow tine and main beam is less than  $90^\circ$ . The main beam is long and curved inwards, forming a lyre shape. Its length is 220 mm. The tine 2 and tine 3 are long and slightly curved inwards, with the length 160 and 220 mm respectively. They have nearly same degree of development, so it is hard to say it is an adaptive type or inadaptive type. The whole length of the right antler is about 480 mm. The cross section of the beam is oval and the fork has a laterally flattened section. The sections of tines are nearly round after growing up from the fork. Grooves exist on the surface of antler.

The beam of V 18760.2 is straighter than other curved ones. Furthermore, the beam after the first fork grew slightly downwards. The tips of tine 2 and tine 3 are lost, however, the preserved part of tine 3 is longer than tine 2 and the section of tine 3 is larger than tine 2. So tine 3 is possibly more robust than tine 2, possibly an inadaptive type according to Teilhard de Chardin and Trassaert (1937).

V 18760.3 is obviously an anomaly with no burr and brow tine. The tine 1 on the right antler is extremely high positioned, and no tine 1 on the left antler. The whole antler is slender than the other specimens and the beam began curved inwards after a straight, short growth.

There are another two antler crowns, V 18760.4-5 (Fig. 1H, I), without the distal parts of main beam preserved. They are possibly younger than V 18760.1, but still show the curvature of beam.

There is only one partial mandible with incisors and canine preserved. The i1 is the largest by oval shaped cross section of root. The i2 has a laterally narrow root and i3 is the

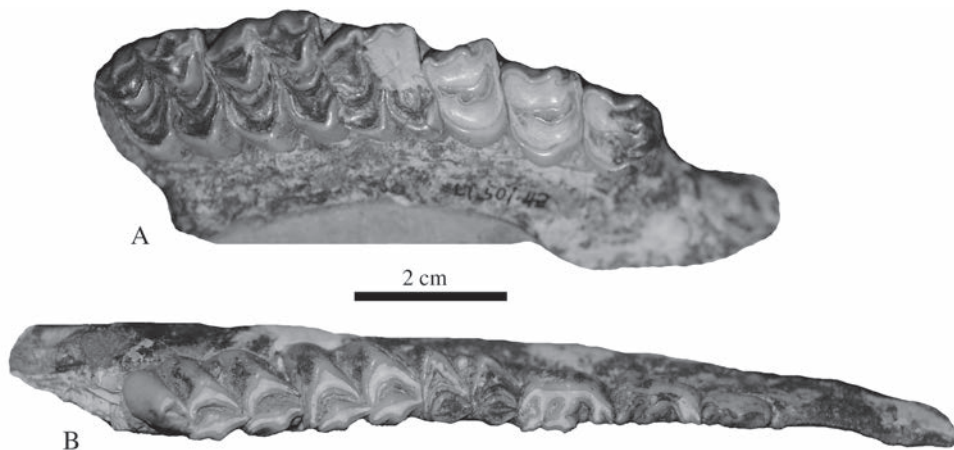


Fig. 2 A maxilla and mandible of *Cervavitus novorossiae* from the Lantian Formation  
A. right maxilla (IVPP V 18670.21); B. left mandible (V 18670.6)

smallest with a shovel shaped crown surface. The canine has a round cross section of root. The diastema part between the canine and p2 is very long, about the length of p2-m2, and very slender. The mental foramen locates to the level of posterior edge of mandibular symphysis. Premolars are not molarized. The size is getting larger and structure more complicated from p2 to p4. The p2 has only weak paraconid, no parastylid developed, and metaconid not separable with the protoconid. The p3 shows clearly bifurcation of parastylid and paraconid. Its metaconid is cone shaped and getting larger with wear, and connects with the protoconid to form an oblique ridge. The p4 is very similar to p3 in morphology, but its metaconid has antero-posterior enlargement, though not enclosing the lingual valleys yet. The three molars have similar structure except m3 has a third lobe with hypoconulid. There is no remarkable *Palaeomeryx*-fold on all the specimens except a vestigial on an unworn molar. Basal pillars (ectostylids) are generally low, and diminish in size from m1 to m3.

One partial maxilla with P2-M3 (Fig. 2A) shows the infraorbital foramen positioned low, above the diastema and anterior to P2. From P2 to P4, the tooth crown gets shorter and wider, the parastyle more and more developed. The molars have similar tooth morphology. Of them, M2 is the largest in size, and M1 has a wider anterior lingual lobe. Basal pillars on the upper molars are very weak.

Liu et al. (1978) described some specimens from the Lantian Formation (localities 63710, 64013 and 64018), referring to *Cervavitus novorossiae* and *Cervavitus* sp. (Fig. 1A-F). There are a skull fragment with part of frontal and parietal bones and pedicles, some antler fragments and several tooth remains. The breadth of the frontal bone between the interior proximal parts of the pedicles is 52 mm and the ridges are extending on the frontal bone. The length and the sections of pedicles are also same with the V 18760.1-2. The first tine is long. The main beam is also curved. The upper molars have developed neocrista (Dong and Hu, 1994) on the postprotocrista and spur on the postmetaconule crista. The cingulum on the lingual wall is present. There are precingulids on the lower molars. The hypoconulid is much larger than the entoconulid on m3. The *Palaeomeryx*-fold is absent.

**Comparison and discussion** Comparing with *Cervavitus novorossiae* from Tarakliya (Moldova), the specimens from Lantian shared major characters: medium size, three-tined antlers, curved beam, long and curved brow tine, flattened cross sections of the beam and tines. However, we have no palmate antler from Lantian. Furthermore, the length of pedicle in adults is shorter and the terminal tines are longer than the Tarakliya ones. The lower molars have no *Palaeomeryx*-fold developed, differing from the Tarakliya specimens with *Palaeomeryx*-fold according to Khomenko (1913). However, it is hard to say if the *Palaeomeryx*-fold is developed or not by his figures, waiting for reexamination of the original specimens.

Fossil deer are rich in the Chinese Late Miocene, especially in the eastern forest fauna of Kurtén (1952). Before recognizing the synonym of three genera of Khomenko, *Cervocerus novorossiae* was widely used following Zdansky (1925) and Teilhard de Chardin and Trassaert (1937). In 1978, Liu et al. referred some materials from Lantian as *Cervavitus novorossiae*.



These materials are not from the same locality of here described specimens, but all from the basal Lantian Formation. The antler and tooth morphology are congruent with the LT. 42 specimens, and should be assigned in the same species.

Dong and Hu (1994) described rich materials from the Yushe Basin, and named two new subspecies *Cervavitus novorossiae shanxius* (Fig. 3C1) and *C. n. minor*. Petronio et al. (2007) proposed to upgrade the subspecies to *Cervavitus shanxius* for all the species of Chinese Late Miocene *Cervavitus* to distinguish with the eastern European forms. Dong (2011) adopted this classification. Restudy on the specimens of *Cervocerus novorossiae* (Teilhard de Chardin & Trassaert, 1937) and *Cervavitus novorossiae shanxius* (Dong & Hu, 1994) from Yushe showed that they all share some prominent characters: the main beam is nearly straight, the brown tine is not so curved, shorter and more robust than *Cervavitus novorossiae*. Therefore, the Lantian specimens should not be assigned to *Cervavitus shanxius*, considering of their close affinity with *Cervavitus novorossiae* from Moldova. Those from Loc. 73 (Yushe Basin) and Loc. 12 (Xin'an, Henan) have mostly similar morphology with *Cervavitus novorossiae shanxius* described by Dong and Hu (1994) from Hounao, Yushe Basin.

From Baode Loc. 49, there are also some fragmentary antlers preserved which are mostly similar with the Lantian specimens, having a curved beam and tine 3 lightly angled with tine 2. Given the validity of *Cervavitus shanxius*, we suppose there have existed *Cervavitus novorossiae* from both Lantian and Baode.

Teilhard de Chardin and Trassaert (1937) named a new species, *Cervavitus demissus*. It is small sized with long pedicles, the brow tines have low location above the burr; no bifurcation on the main tines, the angle between the brow tine and the main tine is small, and the orientation of the beam forms a straight line with the pedicle; the antler extends backwards as in *Muntiacus*, and there have grooves on the surface of the antler. Dong (2011) regarded *Cervavitus demissus* as a synonym of *C. shanxius* because the species was represented by few specimens that fall into the age and environmental variations of *C. shanxius*, and there is furthermore no discovery elsewhere since then.

Teilhard de Chardin and Trassaert (1937) also erected a new genus and new species, *Platycemas infans*. It has three sagittally palmated small tines, and was suspected to be a survival form in the Pliocene of the peculiar Middle Miocene *Stephanocemas* Colbert, 1936. Dong and Ye (1997) considered *Platycemas infans* Teilhard & Trassaert, 1937 was a pathological variation form of *Cervavitus novorossiae* considering of no further specimens found in later investigations (1938-1994), and their study on the morphological variation within *Cervavitus novorossiae*. It was very likely an antler of *C. novorossiae* formed during testicles' injury. Furthermore, the authors concluded the morphological differences between *Procapreolus latifrons* Schlosser, 1924 and *C. novorossiae* was intraspecific and was of random variation.

In describing the fossils collected by the Sino-USSR expedition in 1959 from Tuchengzi (Tuchetse), Huade district, Nei Mongol, Qiu (1979) named a new species, *Cervocerus*

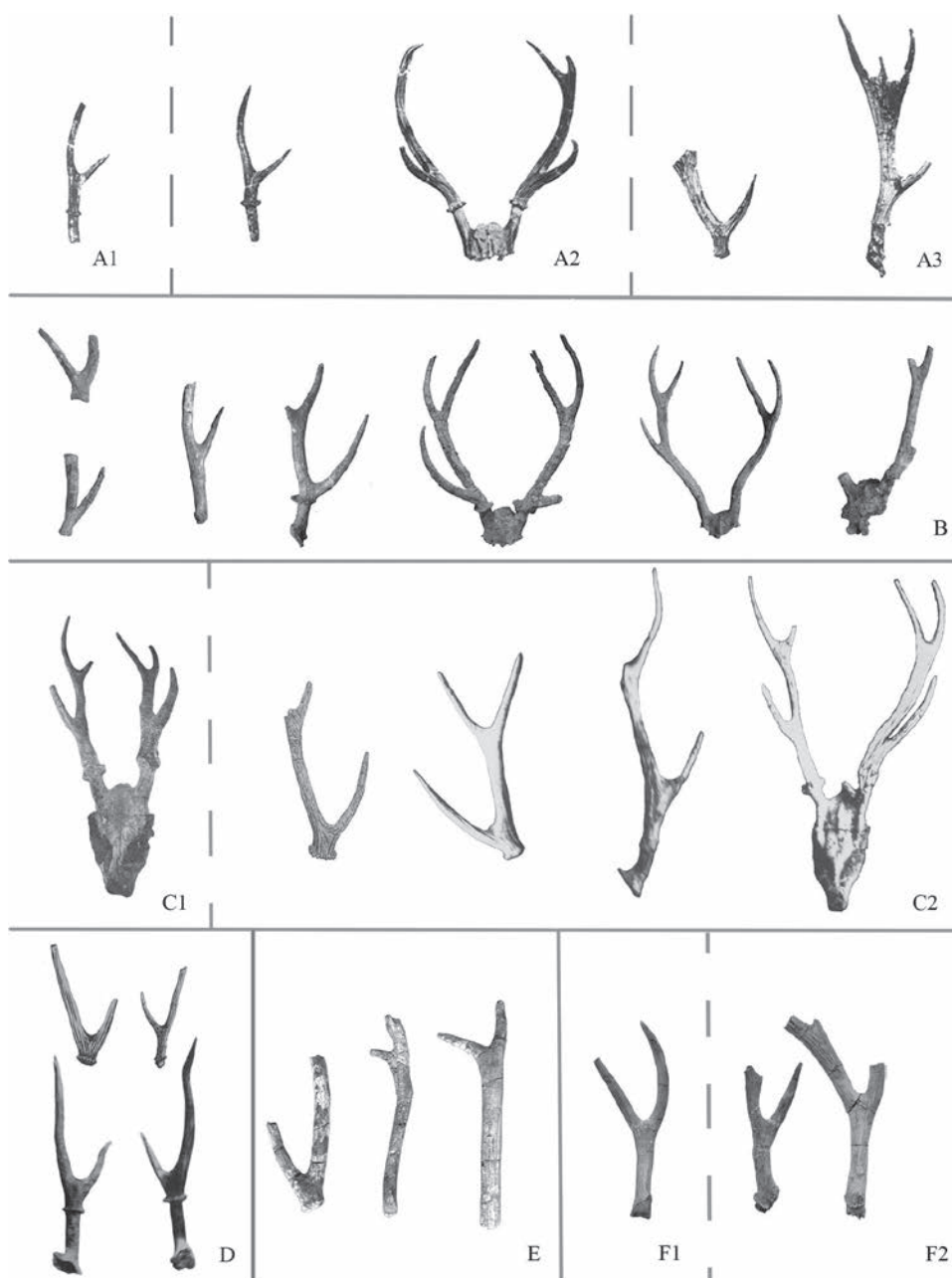


Fig. 3 Antlers of *Cervavitus* (not to scale)

A1. *Cervavitus tarakliensis*, A2. *Cervocerus novorossiae*, A3. *Damacerus bessarabiae*, Tarakliya (from Khomenko, 1913); B. *Cervavitus novorossiae* from Lantian; C1. *Cervavitus novorossiae shanxius*, Yushe Basin (from Dong and Hu, 1994); C2. *Cervavitus novorossiae*, Yushe Basin (from Teilhard de Chardin and Trassaert, 1937); D. *Cervavitus demissus*, Yushe Basin (from Teilhard de Chardin and Trassaert, 1937);

E. *Cervocerus ultimus*, Yuanmou Basin (from Lin et al., 1978); F1. *Cervavitus novorossiae*,

F2. *Cervocerus huadeensis*, Huade (from Qiu, 1979)

Note: In this paper, all the above specimens are referred to different species of *Cervavitus*: *C. novorossiae* (A1-A3 and B), *C. shanxius* (C1, C2 and D), *C. ultimus* (E), and *C. huadeensis* (F1-F2)



*huadeensis* for some specimens and classified others into *Cervocerus novorossiae*. After reviewed these specimens, we inclined to assign them in one single species: *Cervavitus huadeensis*. The materials referred to *Cervocerus novorossiae* (Qiu, 1979) were possibly the younger stage of *C. huadeensis*. These specimens showed different growing stages of one species. When animals are young, they have long and round pedicles with three tines and curved main beam, the first tine growing immediately from the burr. As the animals grow up, they have larger body size and antler, meanwhile, the pedicle becomes slightly shorter. There formed tine 4, and the main beam is not so curved and getting more or less straight and flat. Its fork is obviously flat in cross section, and the tines also become flatter and flatter till the sword-shaped tine appears. However, the first tine always grew from the developed burrs. Hence we consider *Cervavitus huadeensis* be a valid species, different from *Cervavitus novorossiae* from Lantian and *C. shanxius* from Shanxi by its larger size, four tines, lower position of the brow tine and the sword-shaped tines.

Lin et al. (1978) named the species *Cervocerus ultimus* based on remains collected from the Early Pleistocene Yuanmou Formation at Yuanmou *Homo* Site. This species have the general characters of *Cervavitus*: three-tined antlers; pedicles prolonged by a ridge on the frontals, the second tine shorter than the third one. Its typical characters are: the second and third tines are shorter and the long beam is straight and slightly curved at the top. The species is also found at Longgupo Site at Wushan in central China (Huang and Fang, 1991).

The second Early Pleistocene *Cervavitus* in southern China, *C. fenqii* Han, 1987, was reported from the *Gigantopithecus* Cave in Liucheng, Guangxi (Han, 1987). It is also characterized by pedicles prolonged by a ridge on the frontals, antlers three tined, and *Palaeomeryx*-fold generally missing. It differs from *C. ultimus* by its smaller antlers, shorter brow tine and main beam, and from *C. shanxius* by its smaller antlers and shorter brow tine (Han, 1987). *C. fenqii* was also reported from Mohui Cave in Bubing Basin, Guangxi (Wang et al., 2007), Longgudong Cave of Jianshi, Hubei (Chen, 2004), and Renzidong Site of Fanchang, Anhui (Dong et al., 2009). And recently, some *Cervavitus*-like teeth were found from the Early Pleistocene deposits in Sanhe Cavern at Chongzuo, Guangxi (Dong et al., 2011). Dong (2011) showed that the Early Pleistocene forms from southern China were morphometrically more similar to *Cervavitus* species from northern China, and the cladistic analysis showed that the forms of southern China were closer to classic *Cervavitus* species than to *Cervus* and that also proved their systematic status in *Cervavitus* rather than in *Cervus*.

### 3 Migration of *Cervavitus* in the Eurasian Continent

The scenario of westward migration of *Cervavitus* was proposed by Petronio et al. (2007). However, they were misled by the dating of *Cervavitus* record from Sigou fauna, Linxia Basin, Gansu Province as Middle Miocene by Fang et al. (2003). Later work shows the paleomagnetic dating given by Fang et al. (2003) was problematic from the biochronological

point of view, and the horizon may either be not correct (Deng et al., 2004, 2013). According to Deng et al. (2004, 2013) and Deng (2009), the earliest records of *Cervavitus* appeared in the Yangjiashan fauna from the Linxia Basin, which shares most species found from typical Baode localities, Shanxi Province. From the Lantian area, the long Late Miocene sequence along the Bahe River produced rich mammal fossils (Zhang et al., 2013). Nonetheless, there is no record of *Cervavitus* from the Bahe Formation. *C. novorossiae* first appeared at the basal part of the Lantian Formation. According to paleomagnetic dating and faunal comparison, the age of LT. 42 was considered as 6.6 Ma (Zhang et al., 2013). The paleomagnetic dating of the Baode red clay shows the first fossil horizon at ~7.2 Ma (Zhu et al., 2008). The classical Baode Loc. 49 was estimated to be 7 Ma (Kaakinen et al., 2013). Hence, the *Cervavitus novorossiae* in China may appear from the very beginning of Baodean age, later than the European records (Poksheshty in Moldova, MN10 according to Pevzner et al., 1987). Therefore, we agree with Dong (2011) to propose the eastward migration scenario of *Cervavitus*.

Mammalian faunal analysis by Fortelius and Zhang (2006) shows strong signal of low endemism during 7-8 Ma with an influx of immigrants from outside of North China. *Cervavitus* may well be one of the elements migrated into North China with the onset of the Asian summer monsoon from Baodean age (Passey et al., 2009). New magnetostratigraphic data shows the Mahui Formation, Yushe Basin, where produced rich materials of *Cervavitus shanxius*, covers the time period later than the typical Baode localities (cf. 5.8-6.5 Ma) (Opdyke et al., 2013). The different characters of *Cervavitus shanxius* might be adaptation to local climate and ecological environment. From Pliocene on, the East Asian winter monsoon intensified, there are much less records of *Cervavitus* from Pliocene and no records completely from Pleistocene in North China. While South China, much less affected by the winter monsoon, may be the last refuge of this genus. The last representative of *Cervavitus* survived into the Early Pleistocene.

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## 陕西蓝田晚中新世新罗斯祖鹿(鹿科, 偶蹄目)

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**摘要:** 描述了陕西蓝田地区蓝田组底部发现的新罗斯祖鹿化石。该种中等大小, 具三分支鹿角, 主枝弯曲, 角基脊延伸至额骨上; 年轻个体的角环与第一分支间距离长, 眉枝长且弯曲; 下颊齿的古鹿褶不发育或缺失。整理中国发现的祖鹿化石, 认为中国晚中新世至早更新世应该有5个种存在: 新罗斯祖鹿(*Cervavitus novorossiae*)、山西祖鹿(*C. shanxius*)、化德祖鹿(*C. huadeensis*)、最后祖鹿(*C. ultimus*)和凤岐祖鹿(*C. fenqii*)。新的生物年代学数据以及对比分析提示祖鹿可能起源于欧洲, 随着东亚夏季风的加强从保德期开始迁入中国。不同于新罗斯祖鹿, 山西祖鹿为适应气候与环境改变而出现了较明显的形态改变。上新世之后冬季风的加强致使祖鹿的分布范围越来越小, 到更新世早期仅在中国南方有遗存。

**关键词:** 陕西蓝田, 晚中新世, 上新鹿类, 祖鹿, 迁移事件

**中图法分类号:** Q915.876 **文献标识码:** A **文章编号:** 1000-3118(2014)03-0303-13

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## 首届中国古脊椎动物学会“杨钟健科学传播奖”评选结果揭晓

在刚刚结束的中国古脊椎动物学会第14次学术年会上，首届“杨钟健科学传播奖”评选结果揭晓，中国科学院古脊椎动物与古人类所王原研究员、北京自然博物馆李建军研究员、光明日报记者齐芳等三人，因在古脊椎动物学与古人类学相关领域的科学传播工作中做出重大贡献，获此殊荣。

杨钟健先生是中国古脊椎动物学的奠基者，为学科的科学研究的科学研究、科学教育、科学传播事业做出了不朽的贡献。为弘扬科学精神，促进古脊椎动物学和古人类学知识的传播和相关科普文化产业的发展，学会联合上海睿宏文化传播有限公司设立“杨钟健科学传播奖”，以奖励在古脊椎动物学和古人类学科学传播领域做出重大贡献的专家和科学传播者，每两年评选一次，由学会理事推荐，常务理事投票选举产生。首届“杨钟健科学传播奖”的获奖人员编写出版科普著作、组织国内外古生物主题科普展览、拍摄科普影视作品、长期跟踪报道学科重要科学新闻，向公众传播科学知识，为提高全民科学文化素养作出了贡献。

该奖励的设置是中国古脊椎动物学会不断探索合作模式、寻求创新突破、拓宽学科发展空间的新尝试。学会正在努力探索一条集研究、保护、利用、开发、科普、教育等多位一体的发展之路，进而在提高全民科学文化素质和实施科教兴国战略中贡献力量。

(刘庆国)