

POSTCRANIAL SKELETON PROPERTIES OF *MAMMUTHUS*  
*TROGONTERII* FROM THE SEA OF AZOV REGION

Министерство науки и профессионального образования  
Республики Саха (Якутия)  
Академия наук Республики Саха (Якутия)  
Институт прикладной экологии Севера АН РС (Я)  
Музей мамонта

Ministry of science and professional education  
of the Republic of Sakha (Yakutia)  
Academy of Science of the Republic of Sakha (Yakutia)  
Institute of Applied Ecology of the North, AS RS (YA)  
Mammoth museum

IV Международная мамонтовая конференция  
г. Якутск, 18 - 22 июня 2007 года

IV International mammoth conference, Yakutsk  
18-22 June, 2007

Тезисы докладов

Abstracts

Ответственный редактор д.б.н. Г.Г. Боекоров

Compiled and edited by Dr. Gennady Boeskorov

Якутск

Yakutsk

2007

Bajgusheva V.S.,  
Azov historico-archeological museum-reserve, 346780, Rostov Region, Azov,  
Moscow str., 38/40.

Titov V.V.,  
Southern scientific centre of the Russian Academy of Science, 3444006, Rostov-on-Don,  
Chekhov str., 41, e-mail: vvtitov@yandex.ru

In 1999, in Kagalnik sand pit in the neighbourhood of the town of Azov (Rostov Region, Russia) on the left basic coast of the Don River delta, 2 km west from Kagalnik village, practically intact skeleton of *M. trogontherii* has been found out in the anatomic occurrence. It was excavated by the employees of the Azov museum-reserve and archeologists of the Rostov State University. 148 definable bones and 26 fine fragments of one individual are revealed. It is the second find of a skeleton of trogontherioid mammoth in this career. The first one was dug out in 1964 (Bajgusheva, Garutt, 1964). Dental characteristics of these finds (number of plates of  $M^3$  with the talon - 21-22 (20-21 without the talon), lamellar frequency is 5.5 on the average;  $M^3$  - 21-22 (20-21 without the talon), frequency of plates 5-5.25) allow to compare them to those from Kolkotova Balka (Tiraspol) (Bajgusheva, 2001).

The evolutionary level of *M. trogontherii* dental system, the position in the section, the data on mollusks and small mammals from underlying beds allow to date elephant findings to the beginning of Middle Pleistocene. The association of rodents including primitive form of *Lagurus transiens*, *Stenocranius gregaloides* and *Microtus nivaloides*, allows relating this elephant to the early stage of Tiraspol faunistic complex of MQR6-5 zone of local biostratigraphical scale (Tesakov et al., 2007).

The individual age of the elephant (excavations year 1999) is about 50 years old. On the basis of pelvis bones characteristics, the skeleton most likely belonged to female (Bajgusheva, 2001). The skeleton of 1964 is considered to be the rests of male of 40-45 years old (Bajgusheva, Garutt, 1964).

The individual sizes and proportions of tubular bones of skeletons from Kagalnik sand pit differ a little. The first skeleton is larger and its bones are more massive. The maximal length of male humerus makes 129 cm, of female humerus - 116 cm, ulna - 125 and 102 cm, tibia - 90 and 80 cm, fibula - 87 and 75 cm, respectively. Slenderness of bones (the ratio of diaphysis width to maximal length), makes 15.3 for humerus of male, and 11.7 - for humerus of female; ulna - 11.4 and 11.3, tibia - 14.3 and 14.1, respectively. The calculated height of the male skeleton at a withers (Garutt, 1964) is 4 m, and 3.6 m for female's one. Though the height of the mounted skeleton of the first of them in an exposition of the Azov museum-reserve is 4.5 m.

The structure of a wrist of both skeletons from Kagalnik sand pit is serial, as with *Archidiskodon elephants* (Bajgusheva, 2001). The width of os lunatum to the width of os magnum is 78.3 % for male, and 89.8 % - for female; the value of difference between widths of the aforementioned bones to the width of os lunatum is 21.7 and 10.21 %, respectively. Such ratio is not characteristic for aserial type of a wrist of *Mammuthus* elephants (Dubrovo, Yakubovsky, 1989).

*M. trogontherii*, from the environs of the town of Azov, are among the largest known representatives of the species to date. However, the ratio of lengths and slender of limb bones of steppe mammoth from Kagalnik sand pit is similar to those from Khadzhibey estuary (surroundings of the city of Odessa; Yatsko, 1948) and Edersleben (Germany). Proportions of limb bones of the described skeletons differ from those found in Novogeorgievsk (Stavropol; Zakrevskaya, 1936) and Chembakchino (the Lower steram of Irtysh River), also being ascribed to *M. trogontherii* by some authors (Kosintsev et al., 2004). The finding of two elephants' skeletons of different sexes of similar individual age in one locality enables to expand data on the range of sexual variability of trogontherioid mammoths skeleton parameters. Besides the smaller sizes, bones of females are more slender.