

内蒙一始新世巨犀*

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巨犀类的化石过去仅发现于渐新世和早中新世地层。1959年秋,中国和苏联的古生物学者,在内蒙乌兰察布盟沙拉木伦河流域北部的乌拉乌苏附近上始新统沙拉木伦组中,采集了一个相当完整的巨犀类的骨架(周明镇、洛日捷斯特文斯基,1960,页7)。这个标本可能是现知最完整的巨犀化石骨架,代表一种比较原始的新属、新种,也是目前知道的年代最早的巨犀类,在形态上也接近于所有晚期巨犀的祖先。

这篇短文是关于乌拉乌苏新巨犀的初步简报,至于全部骨骼及属于同一种的其它新材料的详细描述和讨论将另文发表。

属 *Juxia*¹⁾ gen. nov.种 *J. sharamurenense* sp. nov.

正型标本 一近于完整的骨架(野外编号 SS04104,中国科学院古脊椎动物与古人类研究所编号 V. 2891)。

其它材料 一不完整的头骨及下牙床(SS04103₁₋₂,苏联科学院古生物研究所保存);一残破的幼年个体的头骨(SS04084; V. 2892);上颌骨断块,带有 M¹—M³(SS04000; V. 2893),下牙床水平枝一段及零星肢骨等。

产地及层位 内蒙乌兰察布盟达安罕茂明安旗乌拉乌苏井稍北洼地。上始新统沙拉木伦组,浅灰绿色及浅棕红杂色粘土层。

属及属型种的特征 一种身体较小的原始巨犀,身体高约为葛氏巨犀(*Indricotherium grangeri*)的一半,头骨、下颌骨及上、下颊齿的基本结构也与葛氏巨犀的极相似。头骨长头型,头后方的顶颞部分长,有明显的矢状嵴;枕髁高;副枕突与听突形成一很宽(前后)的突,而与关节后突分开。额及鼻骨上没有表示有角存在的印痕,额骨前部及鼻骨后部向背侧形成弧形隆起,向前,鼻骨逐渐向下倾斜,其游离部分细长,成尖锥状,断面为尖角向下的三角形;鼻颌切迹深,达 P² 后方。

下颌骨的构造与葛氏巨犀的很相似,但水平枝前端不象其它晚期巨犀的那样向下弯曲;下颌联合部也较短,后沿在 P₁ 处。

齿式完全 $\left(\frac{3 \cdot 1 \cdot 4 \cdot 3}{3 \cdot 1 \cdot 4 \cdot 3}\right)$ 。上、下门齿的排列较疏散,不特化,第一对已稍增大,其它两对较小,但未明显地退化;犬齿位置靠近于第三对门齿后侧,大小及形态皆与门齿相近,上犬齿稍大;犬齿后方与第一对前臼齿间有一较长的虚位。

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1) *Juxia*——“巨犀”,汉语拉丁拼音。

顛后部分骨骼已具有明显的巨犀类的特征,但整个說来,結構比較輕巧,不象已知的其它各种那样笨重。

脊椎部分的特征,在頸椎上最为明显。各个頸椎均已加长,但没有象晚期巨犀所特有的椎体内的中空現象。椎头与椎窝为圓形而不是扁圓形。肩胛骨在比例上較葛氏巨犀的长,肩峯不明显,岡結节发育。四肢骨骼修长,不象晚期巨犀中那样近于柱状,骨两端的关节部分使肢骨可以作較大角度的折曲;各种結节及隆起都較显著和粗糙。腕及跗骨較高,不象后期类型中那样趋于扁平。掌及跖骨修长。

正型标本的一些主要部分的測量(单位:毫米)

头骨长(Length, skull, Pmx to condyle).....	595(mm)
上齿列长(L. I ¹ —M ³)	310
上頰齿列长(L. P ¹ —M ³)	215
下頰长(L. mandible)	445
下齿列长(L. I ₁ —M ₃)	300
下頰齿列长(L. P ₁ —M ₃)	200
肩胛骨长(L. scapula)	515
肱骨长(L. humerus)	490
挠骨长(L. radius)	610
尺骨长(L. ulna).....	710
股骨长(L. femur)	605
脛骨长(L. tibia)	590
第三跖骨长(L. mt. III)	265

比較 內蒙烏拉烏苏的始新世巨犀,在骨骼及牙齿的基本构造上已經明显地具有巨犀类的特征,但与所有过去已知的各种巨犀类比較,都較原始。身体的大小只有一般漸新世中、晚期巨犀的一半,即使和可能为漸新世早期的較小的类型(如 *Indricotherium parvum*)比較也小得多,与一般始新世的真犀类(如 *Eotrigonias*, *Prohyracodon*)比較,則已显得十分庞大了。沙拉木伦巨犀的身体大小更接近于一般漸新世犀类。但在另一方面,根据最近在亚洲新发现的一些材料,如內蒙及西伯利亚的 *Pappaceros* (Wood, H. E., 1963) 和古脊椎动物所在河南卢氏采集的一些尚未描述的标本看来,始新世真犀类已經有一些种类大小和沙拉木伦巨犀相接近了。

沙拉木伦巨犀最明显的一个特点是有完全的前部齿式,且不十分特化,和与它同时的真犀类的牙齿基本上十分相似,只是第一对門齿已有增大的趋势。在这一点上,本文作者不久前記述的烏尔丁巨犀(*Urtinotherium* 周、邱, 1963)是唯一有完全齿式的巨犀类,只是后者的第一对門齿已強烈增大,而其它門齿及犬齿則退縮。另外,前頰骨及下頰的末端并没有晚期巨犀那种向下弯曲的現象,下頰骨的前端甚至微微向上收斂。

沙拉木伦巨犀的头骨及顛后骨骼的构造基本上已和典型的巨犀类有許多相似之处。主要的区别是頸椎椎体沒有中空的現象,四肢骨比較修长,比較輕巧,不象后期类型中那样近于圓柱状。

总之,沙拉木伦巨犀無論在形态上或时代上,都是現知最原始的巨犀类,并且可能是

所有始新世以后的巨犀类的祖先。比较特别的是乌尔丁巨犀,它的前部齿列从 I_1 至 P_1 都比较密集,可能,乌尔丁巨犀,除第一对门齿继续增大外,其余的门齿、犬齿退缩比较不甚显著。其次,沙拉木伦巨犀的时代虽然较早(晚始新世),但是它的巨犀类的性质已十分明显,已很难看出它和其它早期犀类之间的关系了,因此,巨犀类最早的起源的时间,应该追溯到更早的年代。

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AN EOCENE GIANT RHINOCEROS

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Among the best and most interesting mammalian materials collected by a field party of Chinese and Soviet palaeontologists in 1959 from the Shara Muren Eocene at the type locality at Ula Usu in Inner Mongolia (Chow and Rozhdestvensky, 1960) is a nearly complete skeleton of giant rhinoceros. These fossils represent a new form of giant rhinoceros evidently more primitive than any of the previously known members of this group, which are all of Oligocene or Early Miocene age. The present paper is a preliminary note of these fossils.

Genus *Juxia** gen. nov.

Type species *J. sharamurenense* sp. nov.

Known distribution and Diagnosis as for the type species.

Juxia sharamurenense sp. nov.

Type An essentially complete and well preserved skeleton, skull slightly distorted (Field No. SS 04104; IVPP, Cat. No. V.2891).

Referred specimens An incomplete skull and mandible (SS 04103₁₋₂); a broken young skull (SS 04084; V.2892); a pair of upper jaw fragments with M^1 — M^3 (SS 04000; V.2893); and other miscellaneous bones.

Locality and Horizon Ula Usu, Shara Muren district, Inner Mongolia. Upper Eocene Shara Muren Formation, in greenish and brownish clays.

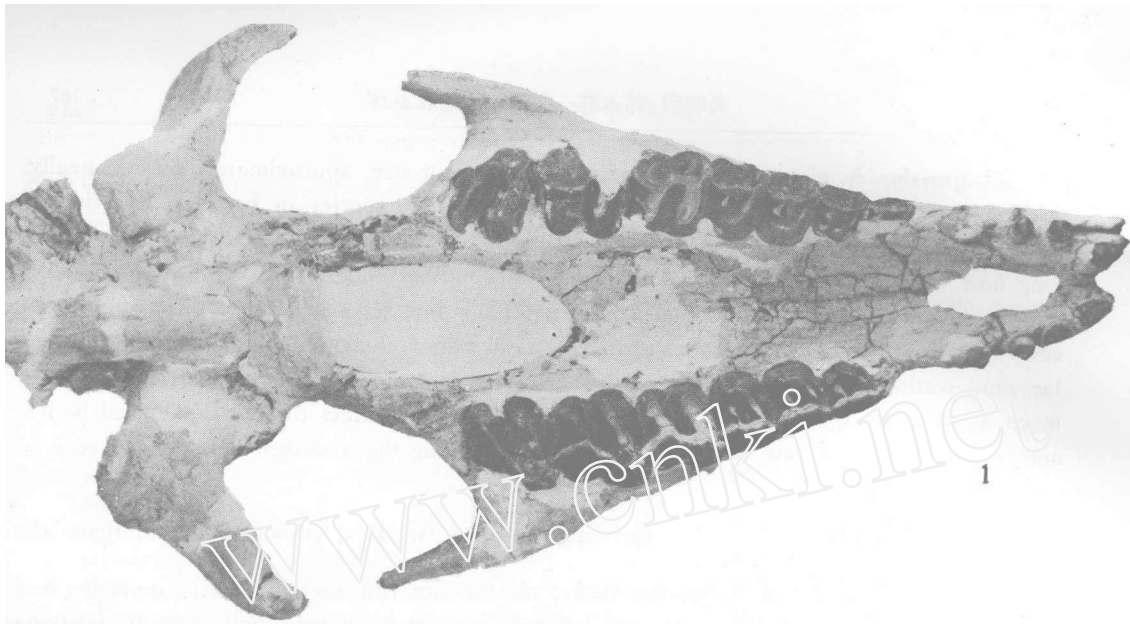
* Ju-xi, giant rhinoceros in latinized Chinese.

Diagnosis A giant rhinoceros relatively small in size, approximately 50%, lineally, that of *Indricotherium grangeri*, and much like the latter species in basic construction of skull, mandible and upper and lower cheek teeth. Skull dolichocephalic, cranial region long and with a distinct sagittal crest; occipital condyles high; paroccipital and post-tympanic processes united into one broad "process", but separated from postglenoid process; frontal region broadly convex upward, nasal bones elongated, with inverted triangular cross-section and tapering anteriorly, and deeply notched at the sides, but not so much as in other species. Premaxillae do not come into direct contact with nasal bones; anterior tip of upper jaw relatively slender and lacking the downward bending as seen in other species.

Dental formula, $\frac{3.1.4.3.}{3.1.4.3.}$; the first pair of incisors, though larger than the others, not much enlarged to become tusks; all the anterior teeth (I—C) sparsely and more or less equally spaced with gaps between one and another and a long diastema between the canine and the first premolar. Symphysis of mandible short, terminating at P₁ posteriorly.

Postcranial skeleton decidedly *Indricotherium*-like, except being slender and more lightly built. Cervical vertebrae elongated, but with solid centra; scapula proportionately much longer, with metacromion, acromion indistinct; limbs slender and not quite pillar-like; articular surfaces of limb bones rather large, allowing larger angles of bending; carpal and tarsal bones comparatively high and do not tend to be flattened; metapodia quite long and slender.

Remarks This new rhinoceros from Shara Muren Eocene is decidedly indricothere-like and more primitive than all the known members of this group. Though of small size and less specialized as an indricothere, it is already among the largest of its rhinocerotoid contemporaries. It shows nearly all the structural features characteristic of that group, except that it has longer limbs and is not so heavily built as the latter forms. It also differs from the others in having full number of little specialized incisors and canines. This feature is retained only with some modification in the recently described Oligocene genus *Urtinotherium* (*U. incisivum* Chow and Chiu, 1963). The occurrence of a rather typical form of giant rhinoceros in upper Eocene indicates that the origination of the group is sure to have dated back to still earlier Eocene time.



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Juxia sharamurenense gen. et sp. nov.