

甘肃、宁夏哺乳动物化石地点

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一、緒 言

甘肃宁夏两省的哺乳动物化石远在十九世紀末叶已被中、外地質工作者注意。虽然当时地質学者对甘肃宁夏的兴趣不在化石,而在和化石有密切联系的、分布在两省的“紅层”时代划分問題;但是随着对“紅层”問題的研究,哺乳动物化石地点也不断有新的发现,如:洛采 (Loczy, 1877—1880), 那林 (Nehring, 1883), 奧勃魯契夫 (Obrutschew, 1893), 袁复礼 (1925), 安特生 (1923, 1925), 楊鍾健、卞美年 (1936), 步林 (Bohlin, 1937, 1942), 德日进 (Teilhard de Chardin, 1926), 路兆洽 (1948) 等等的工作。其中以采集化石为主要目的而收获較大的有中瑞考察队 1931—1932 年在甘肃西部的工作;法国学者德日进、桑志华 (1918—19, 1927) 在宁夏和甘肃东部的工作。此外,尚有我国地質学家王永焱在甘肃南部武都三趾馬动物羣的发掘工作 (Young, 1948)。过去在中国古生物志中发表的哺乳动物化石資料有相当部分也来自甘肃、宁夏。

解放后,随着建設工作,特别是地質工作的开展,甘肃、宁夏地質局及其他有关的单位进一步在这个地区发现了不少哺乳动物化石地点和化石。这些材料大部分已經研究发表。中苏古生物考察队最近两年在这地区对脊椎动物化石的調查和发掘也进行了不少工作。

本文根据現有的資料对这两地的哺乳动物化石地点、层位、动物羣进行整理和对比,为今后在这地区更深入地展开哺乳动物化石調查研究提供資料。

最后感謝不断在工作中給予指导的周明鎮教授。

二、化石地点

A. 早第三紀哺乳动物化石地点

I. 宁夏:

1. 灵武清水营漸新世哺乳动物羣:

Cyclomyxus lohensis Matthew et Granger

Indricotherium grangeri (Osborn)

Schizotherium sp.

Archacotherium ordosius Young et Chow

“*Eumeryx*” sp.

这一地点是 1955 年西北地質局一个工作队发现的。他們所采的化石已由楊鍾健、周明鎮等研究发表 (楊、周, 1956; 胡, 1959)。根据楊、周的意见这一动物羣相当于蒙古的

三达河¹⁾ (Hsanda gol), 苏联哈萨克斯坦的卡拉-达乌层 (Kapa-Tay 或 *Indricotherium* 层) (Borisiak et Beliaeva, 1948), 以及我国内蒙古二连附近的呼尔井砾石层²⁾ (Houldjin Gravels) 和甘肃西部党河流域的沙拉果勒河 (Shargaltein Gol) 层的动物羣。

2. 同心县塔儿湾巨犀 (*Indricotherium*) 地点。

3. 固原以东小关山及隆德一带巨犀地点。

以上两个地点都是石油部有关地质队发现的。化石未經過研究。

上述宁夏地点都分布有巨犀化石, 特别是灵武清水营有确切的葛氏巨犀, 根据格罗莫娃、柏里侠克及别列也娃 (Gromova, 1959; Borisiak and Bliaeva, 1948) 的意见认为葛氏巨犀仅分布在中渐新世。因此以上所提的动物羣应认为是中渐新世的动物羣。过去在文献中认为是上渐新世动物羣应予以更正。

II. 甘肃:

1. 党河南端上游沙拉果勒河乌兰达湾、石羌子沟渐新世动物羣:

<i>Palaeoerinaeus</i> cf. <i>acridens</i> Matthew et Granger	<i>Tachyoryetoides obrutschewi</i> Bohlin
? <i>Palaeoerinaeus</i> sp.	<i>T. intermedius</i> Bohlin.
Erinaceidae small species	<i>T. pachygnathus</i> Bohlin
<i>Desmatolagus shargatensis</i> Bohlin	<i>Karakoromys</i> cf. <i>decessus</i> Matthew et Granger
? <i>D. parvidens</i> Bohlin	<i>Leptotataromys gracilidens</i> Bohlin
<i>D.</i> large species	<i>Tsaganomys altaicus</i> Matthew et Granger
<i>Sinolagomys kansuensis</i> Bohlin	<i>Didymoconus</i> sp.
<i>S. major</i> Bohlin	? <i>Cervulinae</i> sp.
<i>S. graciles</i> Bohlin	Small hypselodont bovine
Sciuridae	Small rhinocerotid
Sicitinae	<i>Indricotherium</i> sp.

这一地点是中瑞考察团 1931 年在甘肃西部党河最南上游沙拉果勒河流域南岸乌兰达湾, 石羌子沟附近发现的。根据步林的报导 (Bohlin, 1937), 这里的地质层为红色割蚀很厉害的岩层。化石多半采自地表面, 仅有少数采自岩层。这一动物羣中如 *Palaeoscaptor acridens*, *Tsaganomys altaicus*, *Karakoromys* cf. *decessus*, *Didymoconus* sp. 等都是蒙古三达河层中出现的种类, 也是我国内蒙三盛公³⁾ 东岸渐新世地层中常能遇到的种类。因此, 党河沙拉果勒层的动物羣可与蒙古的三达河层动物羣和内蒙的三盛公渐新世动物羣相对比, 同是属于中渐新世的动物羣。

1) 蒙古三达河层动物羣:

Carnivora: *Hyaenodon pervagus*, *Didymoconus colgatei*, *D. berkcyi*, *Amphicticeps shackelfordi*, *Bunaclurus ulysses*, *B. parvulus*, *Palaeoprionodon gracilis*, *Cynodictis* (?) *elegans*, *C. (Pachycynedon) teilhardi*, *Viverravus constans*; Rodents: *Tsaganomys altaicus*, *Cyclomytus lohensis*, *Cricetops dormitor*, *Selenomys mimicus*, *Tataromys plicidens*, *T. sigmodon*, *Karakoromys decessus*, *Prosciurus lohculus*, *Eumys asiaticus*, *Desmatolagus gobiensis*, *D. robustus*; Insectivora: *Tupaiondon morrisi*, *T. minutus*, *Palaeoscaptor acridens*, *P. rectus*. *Perrisodactyla*: *Indricotherium grangeri*, *Epiacetherium*. *Artiodactyla*: *Eumeryx culminis*.

2) 内蒙古呼尔井砾石层动物羣:

Entelodon dirus, *Indricotherium* sp., *Cadurotherium* sp., *Caenopus* (?) sp..

3) 三盛公东岸渐新世动物羣即德日进在文献中提到的 Saint-Jacques 的动物羣: *Palaeoscaptor acridens*, *Hyaenodon* sp., *Ictitherium* sp., ? *Amphicyon* sp. *Desmatolagus pusillus*, *D. radcidens*, *D. robustus*, *Duplicidentia* indet. gen., *Tataromys plicidens*, *Tataromys deflexus* ? *Karakoromys* sp., *Tsaganomys altaicus*, *Indricotherium grangeri*, *Schizotherium* cf. *avium*, ? *Aceratherium* sp., *Hyrachius* sp., *Eumeryx*?, *Serridentinus*.

2. 党河南端上游塔崩布勒克殷德渐新世哺乳动物羣:

<i>Palaeoerinaeus</i> cf. <i>rectus</i> Metthew et Granger	cf. <i>Cricetodon</i> sp.
<i>P. kansuensis</i> Bohlin	Aff. <i>Eumys</i> sp.
<i>P. minimus</i> Bohlin	<i>Tachyoryctoides</i> Bohlin
? Erinaceidae sp.	<i>Tataromys grangeri</i> Bohlin
Soricidae sp.	<i>Tataromys</i> cf. <i>sigmodon</i> Metthew et Granger
? Talpidae sp.	<i>Yirdirtemys woodi</i> Bohlin
<i>Desmatolagus</i> sp. (? <i>Shargaltensis</i>)	<i>Sayimys Obliquidens</i> Bohlin
<i>Sinolagomys kansuensis</i> Bohlin	Lagomorpha
<i>Sinolagomys major</i> Bohlin	Carnivora
<i>Sciurus</i> sp.	Proboscidea
<i>Parasminthus asiae-centralis</i> Bohlin	Cervidae
<i>Parasminthus tangingoli</i> Bohlin	Bovidae
<i>P. parvulus</i> Bohlin	<i>Indricotherium</i>
Cf. Sacistinae sp.	? <i>Schizotherium</i> sp.
? Sacistinae sp.	<i>Kansupithecus</i> sp.

这一地点的动物羣化石也是中瑞考察团在甘肃西部调查时发现的。根据步林的报导和研究 (Bohlin, 1942), 这一地点的岩层经过地壳运动, 岩层次序较乱, 化石较另散, 动物羣中出现的某些种类也可以从“沙拉果勒”层中见到。根据步林的意见, 这一动物羣也可以和“沙拉果勒”层, 三达河层及三盛公层相比, 也同是属于中渐新世的动物羣。

3. 惠回堡十二马厂早第三纪哺乳动物化石:

Mimolagus rodens Bohlin
Anagalopsis kansuensis Bohlin

这一地点位在惠回堡白杨河右岸的十二马厂, 也是中瑞考察团发现的。根据步林报导和研究 (Bohlin, 1951), 含化石的岩层是一种砖红色的砂岩。根据化石很难确切肯定它的时代。因为 *Anagalopsis kansuensis* 化石很特殊, 是介于原始食虫类和灵长类之间的类型, 对它的系统位置尚未搞清, 目前很难和其他地点的动物羣对比。

B. 晚第三纪哺乳动物羣地点

I. 宁夏:

宁夏同心县东北 22 公里中新世—上新世三稜齿象 (*Gomphotherium* sp.) 化石地点。

这地点 1960 年中苏古生物考察队曾调查过 (Rozhgenstvensky, 1961)。当地含两层晚第三纪哺乳动物化石层, 其中有三稜齿象等化石。

II. 甘肃:

1. 永登咸水河晚第三纪哺乳动物羣:

Protalactaga grabau Young
? *Protalactaga anderssoni* Young
Hetersminthus orientalis Schaub
Plesiocricetodon leei Young
Paracricetulus schaubi Young
Listriodon gigds Pearson
Rhinoceros sp.
Gomphotherium wimani (Hopwood)

这一地点是 1936 年杨鍾健、卞美年在调查甘肃中部阜兰永登地区新生代地质时发现

的(楊、卞 1937), 根据他們的意見認為在动物羣中含有 *Listriodon gigas*, 及 *Gomphotherium wimani* 及一些古老的齧齿类。但在蓬蒂紀中典型的化石如三趾馬, 大唇犀, 原田鼠在这动物羣中都沒有出現。因此这一动物羣的时代比蓬蒂紀时代要老些。

2. 和政晚第三紀哺乳动物化石(胡, 1962):

Hipparion sp.
Chilotherium sp.

3. 宁定洞帘乡第三紀后期奇蹄类化石(杜, 1947)。

4. 靜宁县晚第三紀哺乳动物羣(张、童, 1961):

Chilotherium spp.
Hipparion hippidioides Sefve
H. platyodus Sefve
H. sp.
Propotamochoerus hyotherioides Schlosser
Gazella cf. *gaudryi* (Schlosser)
Cervidae gen. et sp. indet.

5. 秦安县蓮花鎮中新世晚期哺乳动物化石(翟, 1959):

Platybelodon sp.
Aceratherium sp.

6. 秦安常营、郭嘉乡和新民乡三顆树晚第三紀哺乳动物化石(翟, 1961):

<i>Hyaenidae</i> indet.	<i>Caviconia</i> indet.
<i>Hipparion</i> spp.	<i>Gomphotherium</i> cf. <i>connexus</i> (Hopwood)
? <i>Aceratherium</i> sp.	<i>Serridentinus</i> sp.
<i>Chilotherium</i> sp.	<i>Gomphotherium</i> sp.
<i>Palaeotragus</i> cf. <i>decepiens</i> Bohlin	Gomphotheriidae indet.
<i>Samotherium</i> sp.	<i>Gomphotherium quinanensis</i> Chow et Chang
Cervidae indet.	

7. 崇信晚第三紀哺乳动物化石:

Hipparion platyodus Sefve
Palaeotragus microdon Koken

8. 涇川瓦窑堡沟北晚第三紀哺乳动物化石:

Paralactaga anderssoni Young
Paralactaga major Young
Gerbillus matthewi Young
Samotherium sinense (Schlosser)

9. 庆阳教子川赵子沟晚第三紀哺乳动物羣:

(Bohlin, 1927, 1935; Teilhard de Chardin, 1926; Zdansky, 1927)	<i>Chleuastochoerus stehlini</i> (Schlosser)
<i>Ictitherium wongii</i> Zdansky	<i>Palaeotragus</i> sp.
<i>I. hyaenoides</i> Zdansky	<i>P. microdon</i> (Koken)
<i>I.</i> sp.	<i>Samotherium</i> cf. <i>neumayri</i> (Rodler et Weithofer)
<i>Hyaena variabilis</i> Zdansky	<i>S. sinense</i> (Schlosser)
<i>Metailurus minor</i> Zdansky	<i>Urmitherium intermedium</i> Bohlin
<i>Hipparion hippidioides</i> Sefve	<i>Gazella dorcadoides</i> Schlosser
<i>H. kreugeri</i> Sefve	<i>G. paotekensis</i> Teilhard et Young
<i>H.</i> sp.	<i>G. gaudryi</i> (Schlosser)
<i>Chilotherium</i> sp.	<i>G. cf. blacki</i> Teilhard et Young
	<i>Protoryx plenifrons</i> Bohlin

P. sp.
Prosinotragus tenuicornis Bohlin
Lagomys sp.
Lophocricetus abbreviatus Teilhard
Cricetus sp.
Prosipheneus licenti Teilhard

10. 华池晚第三紀哺乳动物化石(胡, 1962):

Gomphotherium watzeensis Hu
Hipparion cf. *dermatorhinum* Sefve
Hipparion coelophysys Sefve

11. 天水晚第三紀哺乳动物化石(楊、刘, 1948):

Gomphotherium elegans Young et Liu

12. 礼县晚第三紀哺乳动物化石(胡, 1961):

Stegodon zdanskyi Hopwood
Hipparion parvum Sefve
Chilotherium sp.

13. 武都龙家沟晚第三紀哺乳动物羣(楊, 1948, Rozhgenstvensky, 1961):

Hipparion spp.
Chilotherium spp.
Cervavitus spp. etc.

在这一地点,地质学家王永焱曾发掘了大批材料。1960年中苏古生物考察队在此曾再度进行了发掘,也采到一些三趾馬动物羣的化石。两批材料都尚未进行研究。

C. 第四紀哺乳动物化石地点

I. 宁夏:

1. 海原县第四紀哺乳动物化石:

Coelodonta antiquitatis Blumenbach

2. 西吉县新营区袁湾村三里湾沟第四紀哺乳动物化石(周, 1961):

Coelodonta antiquitatis Blumenbach

II. 甘肃:

1. 庆阳第四紀哺乳动物羣 (Young, 1927; 胡, 1962):

<i>Ochotona daurica</i> Pallas	<i>Coelodonta antiquitatis</i> Blumenbach
<i>Canis</i> sp.	<i>Sus</i> sp.
<i>Vulpes</i> sp.	<i>Cervus</i> sp. A.
<i>Hyaena</i> sp.	<i>Cervus</i> sp. B.
<i>Felis</i> sp.	<i>Bos primigenius</i> Bojanus
<i>Equus przewalskii</i> † Poliakoff	<i>Bos.</i> sp.

三、小 結

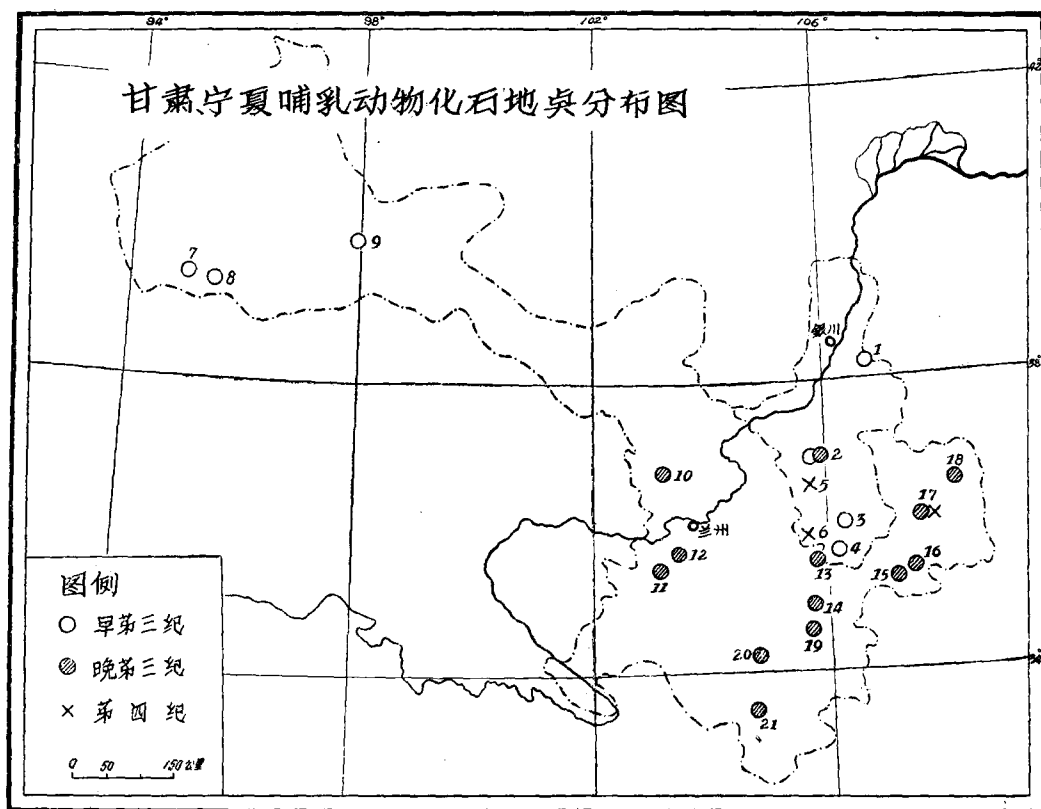
根据上述資料,我們对甘肃、宁夏的哺乳动物化石性質、分布的了解可归納为下列四点:

1. 甘肃、宁夏分布有中渐新世的哺乳动物羣,东面可与我国内蒙和蒙古相当的动物羣

对比,西面可与苏联哈萨克斯坦卡拉-达乌层对比。

2. 这一地区至今尚未发现老于中渐新世的哺乳动物化石;但并不是没有发现的可能。例如甘肃惠回堡十二马厂发现的 *Anagalopsis* 是一种介乎原始食虫类和灵长类的化石,虽然它们的时代尚未确定,但有比中渐新世老的可能,化石本身在进化系统上也很有意义。

3. 这地区的晚第三纪化石层位主要可分为二层:即上中新统和下上新统,有时这二层常常是连续的。在上中新统中含有 *Platybelodon*, *Gomphotherium*, *Aceratherium* 及 *Lisriodon* 等化石,以甘肃永登咸水河,秦安,华池及宁夏同心县为代表。在下上新统中常含有 *Hipparion*, *Chilotherium*, *Gazella gaudryi*, *Samotherium* 等。以甘肃庆阳,和政,涇川,武都等地为代表。



4. 解放前对于甘肃、宁夏两地区的第四纪哺乳动物化石所知甚少,近年来陆续发现一些第四纪时期的化石,特别是披毛犀化石分布较广。庆阳的第四纪哺乳动物群虽然没有发现猛犸象,但基本上可与东北第四纪晚期的猛犸象-披毛犀动物群对比,与河套薩拉烏苏动物群更为接近。

表 I

地层时代	哺乳类动物羣或化石层	相当层位
更新世晚期	猛犸象-披毛犀动物羣(甘肃庆阳)	薩拉烏苏河层(内蒙)
上新世初期	三趾馬 (<i>Hipparion</i>) 动物羣(甘肃和政、靜宁、秦安、崇信、涇川、庆阳、礼县、武都等)	保德、榆社三趾馬层(山西)
中新世晚期	宁夏同心, 甘肃秦安、华池、永登含 <i>Platybelodon</i> 及 <i>Gomphotherium</i> 层	通古尔层(内蒙)
渐新世中期	巨犀 (<i>Indricotherium</i>) 含 <i>Palaeoscaptor</i> 及 <i>Tsaganomya</i> 层(甘肃党河沙拉果勒河, 塔崩布勒克; 宁夏灵武)	呼尔井砾石层、三盛公层(内蒙)、三达河层(蒙古)、卡拉-达烏层(苏联)
第三紀初期	甘肃惠回堡含 <i>Anagalopsis</i> , <i>Mimolagus</i> 层	—

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甘肃宁夏哺乳动物化石地点

1. 灵武清水营	Lingwu	11. 和 政	Hocheng
2. 同心塔尔湾	Tungsing	12. 宁 定	Ningting
3. 固 源	Kuyuan	13. 静 宁	Tsingning
4. 隆 德	Lungte	14. 秦 安	Chingan
5. 海 原	Haiyuan	15. 崇 信	Chunhsin
6. 西 吉	Sichi	16. 涇 川	Chingchuan
7. 沙拉果勒河	Shargaltein Gol	17. 庆 阳	Kingyang
8. 塔朋布拉克	Taben-buluk	18. 华 池	Watze
9. 惠回堡十二馬厂	Shih-ehr-ma-cheng, Hui-hui-puo	19. 天 水	Tienshui
10. 永登咸水河	Yungtung, Hsienshuiho	20. 礼 县	Sili Lihsien
		21. 武 都	Wutu

CENOZOIC MAMMALIAN FOSSIL LOCALITIES IN KANSU AND NINGSHIA

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(Summary)

The occurrence of mammalian fossils in Kansu and Ningshia provinces was known as early as in the later part of 19th century (Loczy, 1877—1880; Nehring, 1883; Obrutschew, 1893). Some Paleogene mammals have been collected by the Sino-Swedish expedition in western Kansu in the year of 1931—1932. Recently a series of new discoveries have been made by the Bureau of Geology of Kansu and Ningshia respectively, most of these materials had been described by Young and Chow (1956), Zhai (1959, 1961), Chow and Chang (1961), Chang and Tung (1961), Hu (1962).

The present paper is a summary of the previous records of the localities, stratigraphy and faunas in these two provinces and a comparative study with their correlatives ones in the adjacent regions.

FOSSIL LOCALITIES

A. Paleogene Mammalian Fossil Localities

I. Ningshia

1. Oligocene Mammalian Fauna of Linwu (cf. page 162).

This locality was discovered by some geologists. The fossils were studied by Young and Chow (1956). According to these authors, this fauna can be compared with the faunas of Hsanda-gol in Mongolia, Kapa-Tay in Kazanstan, Houldjin Gravels in Inner Mongolia and the Shargaltein Gol in western Kansu.

2. Localities in Tungsing, Kuyuan and Lungte with *Indricotherium* (not yet described).

II. Kansu

1. Oligocene Mammalian Fauna of Shargaltein Gol in western Kansu (cf. p. 163).

The locality was discovered by Bohlin in 1931. The materials though rather fragmentary, indicated the presence of an Oligocene mammalian fauna. It contains *Palaeoerinaceus acridens*, *Tsaganomy altaicus*, *Karakoromys* cf. *decessus*, *Didymoconus* sp., which are also present in the faunas of Hsanda gol and Saint-Jack. Therefore, those strata can be correlated with each other.

2. Oligocene Mammalian fauna of Taben-buluk in western Kansu (cf. p. 164).

This locality also was discovered and studied by Bohlin. The character of the fauna is similar to that of the Shargaltein Gol.

3. Paleogene Mammalian Fossils from Shih-ehr-ma-cheng on the right bank of the Po-Yang-ho. According to the study of Bohlin, the fossils found here are rather peculiar,

it seems that almost no comparison can be made with what is known from other localities in Asia or elsewhere.

B. Neogene Mammalian Fossil Localities

I. Locality of *Gomphotherium* of Tungting, Ningshia (not yet described)

II. Kansu

1. Neogene Mammalian Fauna of Hsienshinho of Yungtung (cf. p. 155).

The fauna were studied by Young and Bien in 1936. The age of this fauna is older than Pontien, because it contains *Listriodon gigas* and *Gomphotherium wimani* and typical *Hipparion* fauna elements: *Hipparion*, *Chilotherium*, *Prosiphneus* are absent in this fauna.

2. Neogene mammalian Fossils of Hocheng (Hu, 1962; cf. p. 156)
3. Late Tertiary Mammalian Fossils with *Perissodactyla* of Ningting
4. Neogene Mammalian Fauna of Tsingning (Chang and Tung, 1961; cf. p. 156)
5. Late Miocene Mammalian Fossils of Liahwachen of Chingan (Zhai, 1959, cf. p. 165)
6. Tertiary Mammalian Fossils of Chingan (Zhai, 1961, cf. p. 156)
7. Neogene Mammalian Fossil Locality of Chunhsin with *Hipparion platyodus* and *Palaeotragus microdon*.
8. Neogene Mammalian Fossil Locality of Chingchuan (cf. p. 156)
9. Neogene Mammalian Fauna of Kingyang (cf. p. 156)
10. Neogene Mammalian Fossils of Watze
Gomphotherium watzensis
Hipparion cf. *dermotorhinum*
11. Neogene Mammalian Fossils of Tienshui (Young and Liu, 1948)
12. Neogene Mammalian Fossils of Lih sien (Hu, 1962)
Stegodon zdanskyi
Hipparion parvum
Chilotherium sp.
13. Neogene Mammalian Fauna of Lunggiakou of Wutu (Young, 1948; Rozhgenstvensky 1961)
Hipparion spp.
Chilotherium spp.
Cervavitus spp.

Wang Yung-yen excavated a considerable number of fossils in this locality. The Sino-Soviet Paleontological Expedition also has collected some fossils of *Hipparion* fauna in 1960. These collections have not yet been studied.

C. Quaternary Mammalian Fossil Localities

I. Ningshia

1. Quaternary Mammalian Fossil Locality with *Coelodonta antiquitatis* in Sichi (Chow, 1961).

II. Kansu

1. Quaternary Mammalian Fauna of Kingyang (Young, 1927; Hu, 1962 cf. p. 166)

CONCLUSION

From the foregoing description, the characteristics and distribution of mammalian faunas of Kansu and Ningshia as understood by us, may be summarized as follows:—

1. The Oligocene mammalian faunas distributed in Kansu and Ningshia can be correlated with those of Inner Mongolia and Mongolia in the North East, and with those of Kazakstan in the West.

2. Until now, though no definite mammals older than Oligocene have been found in this district, the possibility of the presence of them is not impossible, for example, *Anagalopsis* which found in Hui-hui-pu of Kansu is an animal between primitive Insectivora and Primate. Bohlin did not make decision about its age, but it might be older than Oligocene.

3. There are two horizons of Neogene fossil beds in this region: Upper Miocene and Lower Pliocene. These two horizons sometimes form continuous depositions. The upper Miocene horizons contains *Platybelodon*, *Gomphotherium*, *Aceratherium* and *Lis-triodon* etc. and the Lower Pliocene horizon contains *Hipparion*, *Chilotherium* *Gazella gaudryi*, *Samotherium* etc.

4. Though no *Mammuthus* had been found in the Quaternary Mammalian Fauna of Kingyang, but judging from the nature of the assemblage of the fossils it can be correlated with *Coelodonta-Mammuthus* fauna of North-East province of China and is more closer to the Sjara-osse gol fauna of Inner Mongolia.

Table I

Geologic Age	Mammalian Fauna of Horizon	Correlatives
Upper Pleistocene	<i>Coelodonta-Mammuthus</i> Fauna (Kiangyang in Kansu)	Sjara-osse-gol
Lower Pliocene	<i>Hipparion</i> Fauna (Hocheng, Tsingning, Chingan, Chunhsin, Chingchuan, Kiangyang Lihsien, Wutu etc. in Kansu)	Paotê, Yushê in Shansi
Upper Miocene	Deposits with <i>Platybelodon</i> & <i>Gomphotherium</i> (Tungsing in Ningshia; Chingan, Watze, Yungtung in Kansu)	Tung Gur (Inner Mongolia)
Middle Oligocene	<i>Indricotherium</i> Beds with <i>Palaeoscaptor-Tsaganomys</i> (Shargaltein gol, Taben-buluk in Kansu, Lingwu in Ningshia)	Houldjin Conglomerate, Saint-Jacques (Inner Mongolia), Hsanda-gol (Mongolia) Kapa-tay(USSR)
Early Tertiary	Brick-red sandstone with <i>Anagalopsis</i> & <i>Mimalagus</i> (Shih-erh-ma-cheng, Hui-hui-puo in Kansu)	--