

# In Search of the Legendary Nian: Could It be *Machairodus horribilis*?

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**Abstract:** - *The legendary ferocious beast of unknown antiquity known as Nian has been narrated in Chinese folklore since the ancient times of the Shang Dynasty and passed down through generations from one dynasty to the next until today. The monster was described as having a body of a bull, the head of a lion, and the horn of a unicorn. It was said that the monster was afraid of loud noises (beating of drums, gongs, and cymbals as well as lighting firecrackers), glaring lights, and also the color red. Hence, these were the things used by the villagers to frighten Nian away. The recent discovery of a fossilized skull of a sabretooth cat known as *Machairodus horribilis* – an enormous cat that roamed northwestern China during the Late Miocene Epoch about seven million years ago – in Longjiagou Basin, China, by a team of researchers from the Chinese Academy of Science, has rekindled interest among folklorists, scientists as well as creationists if the legendary Nian might be anything associated with the sabretooth cat. This is just a hypothesis that the author of this paper has postulated and the verdict remains open for the readers to make their own decision.*

**Keywords:** - China, Chinese Folklore, Legend, Monster, Nian, Sabretooth Cat

## INTRODUCTION

Stories of the legendary beast called Nian Shou (Chinese: 年獸; pinyin: Niánshòu), or just Nian for short, are often told in the Chinese folklore on the eve of the 15 days in celebration of the Chinese Lunar New Year. What kind of a beast is Nian? The old Chinese word *Nián* is translated to mean ‘ripe grains’ and was commonly found in oracle bone inscriptions with astronomical records dating back more than 3000 years ago during the 14<sup>th</sup> century Shang Dynasty (Chinese: 商朝; pinyin: Shāngcháo) whose chronology based on the current text of *Bamboo Annals*<sup>2</sup> stated that the dynasty lasted from 1556BC to 1046BC. It was during the Western Zhou Dynasty (Chinese: 西周; pinyin: Xīzhōu), which was part of the Zhou Dynasty (Chinese: 周; pinyin: Zhōu; Old Chinese: *tiw*) (Baxter & Sagart, 2014, p. 155), lasting initially from 1046BC until 771BC (Li, 2013), that

Nian (Chinese: 年) was formally used to mean ‘year’ (according to the *Erya*<sup>3</sup>; Chinese Mythology Podcast, 2018), and the beginning of the year was called *Sui Shou*. This word replaced all the terms used in previous eras. Wikipedia contributors (2022a) reported that the *Shuowen Jiezi*<sup>4</sup> (post-*Erya*) records the character *Nian* to mean ‘ripeness of grains’ and was composed of *he* and *qian* - where *he* (禾, rice plant) and *qian* (千, indicating the sound) - in the sense of a great harvest. Interestingly, in 104BC, “Emperor Liu Che of the Western Han Dynasty (from 202BC to 9AD) presided over the formulation of the solar-lunar calendar that is similar to the Hebrew Calendar” (That’s Qingdao, 2022, para. 8).

According to legends, Nian lived in ancient China during a period known as *Shànggǔ*, which is translated to mean roughly “a very long time ago” (Flake, 2014, para. 2). As the legends of Nian go

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<sup>2</sup> The *Bamboo Annals* (Chinese: 竹書紀年; pinyin: Zhùshū Jìnián), which is also known as the *Ji Tomb Annals* (Chinese: 汲冢紀年; pinyin: Jí Zhǒng Jìnián), is a chronicle of ancient China, beginning in the earliest legendary period of the Yellow Emperor right to 299BC, with the later centuries focusing on the history of the State of Wei during the period of the Warring States.

<sup>3</sup> *Erya* is the authoritative lexicographic guide to Chinese classic texts during the Han Dynasty. During the Song Dynasty Confucian scholars categorized it as one of the 13 Classics, “making it one of the more revered works in the history of Chinese literature, not to mention lexicography” (Creamer 1992, p. 112).

<sup>4</sup> *Shuowen Jiezi* (Chinese: 說文解字; literally, the phrase means ‘discussing writing and explaining characters’) is an ancient Chinese dictionary compiled by Xu Shen, a Han Dynasty scholar, who finished editing it in 100CE. However, because of an unfavorable imperial attitude towards his scholarship, Xu Shen waited until 121CE before having his son, Xǔ Chōng, present it to Emperor An of Han Dynasty along with a memorial.

hand in hand with the origins of the Chinese New Year (see Encyclopedia Britannica, 2021, for detail), Nian (see Figure 1 below) has been described to be a kind of monstrous beast of antiquity with “a body of a bull, head of a lion, and horn of a unicorn” (That’s Qingdao, 2022, para. 2). However, the attributes of the strange creature in the modern legend of Nian (e.g., fear of noise and fire) have correlated with ancient legends relating to the use of loud firecrackers to drive away ape-like creatures known as shanxiao that inhabited in the mountains first recorded in the *Shanhaijing* (Chinese: 山海经; see <https://ctext.org/shan-hai-jing> for detail), literally translated, means “Classic of Mountains and Seas” (Birrell, 2000). To some extent, the beast resembles some of those creatures that can be seen in *Where the Wild Things Are* by Maurice Sendak and was published by Harper and Row in 1963 (see Figure 2).



Figure 1. A photograph was taken of Nian performed by a Chinese lion dance troupe

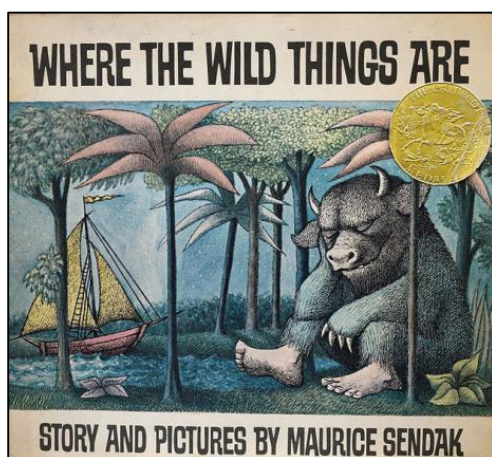


Figure 2. The book *Where the Wild Things Are* (Sendak, 1963)

Some accounts have described Nian as a lion with a bull’s heart. Others depict the beast’s appearance, with some claiming that it resembles a flat-faced lion with the body of a dog and prominent incisors (Flake,

2014). Still, other authors have described it as “larger than an elephant with two long horns and many sharp teeth” (Yuan, 2006, p. 168). The accounts of the beast’s appearance vary. In many depictions, “it resembles the stone lions sometimes seen outside Chinese restaurants and/or banks: flat-faced, with a dog’s body, prominent incisors, and a barrister’s powdered wig” (Flake, 2014, para. 2). Unfortunately, this has suggested the beast “to be fairly effete and underwhelming, with very high blood pressure” (Flake, 2014, para. 2).

According to that’s Qingdao (2022), one version of the story says that Nian lived and hunted in the mountains. Only during the winter time when food became scarce, the beast would come down from its hideout in the mountain to attack nearby villages for food. For every 365 days (i.e., one year), Nian prowled about the villages scaring the people who lived there, and the beast would go hunting after dark. As a result, the villagers often regarded the terrible night as a sacrifice and called it *Nian Guan* (Yuan, 2020). They would leave food at the doorstep in an attempt to divert Nian from attacking and/or eating people.

Another version described Nian as a beast that lived at the bottom of the sea most of the time and would only go ashore on the last day of the Chinese lunar calendar to attack and devour villagers and livestock living close to its territory.

Over time, the villagers began to learn that Nian was frightened of the color scarlet (i.e., color shade of bright red), fire, and loud noise. As a result, the villagers created a huge replica of the beast with bamboo, colorful paper, and cloth of colors scarlet, red, and orange. The replica along with the vigorous beating of drums, gongs, cymbals as well as firecrackers were used to frighten Nian away (Laban, 2016). The ritual was repeated during every Chinese New Year (Chinese: 農曆新年; pinyin: Nónglì Xīnnián) and this has been passed down from one generation to the next until today. Thus, the tradition of *Guo Nian* (Chinese: 过年), which literally means “pass over Nian” or “overcome Nian”, has been established based on the legend of Nian.

According to one myth, an old Taoist monk by the name Hongjun Laozu saw how the villagers were so terrified by Nian that he took it upon himself, relied on his wits to challenge the beast and eventually captured Nian, which became his mount (see Beijing Tourism Operations Monitoring Center, 2013, for more detail).

After Nian was captured by the Taoist monk, the relieved villagers held a big celebration, and the ritual (i.e., using the color red, fire, and noise) involved in banishing the beast was repeated the following year and every year thereafter. “The ritual was passed down from generation to generation and the custom of celebrating New Year with firecrackers, noise, and the color red has persisted to this day” (Gillian, 2022, para. 7).

### **The Sabretooth Cat found in China**

In 2016, Best (2016) of the UK-based Daily Mail (also reported in the Mail Online) reported a research team of Chinese paleontologists led by Deng Tao from the Chinese Academy of Science unearthed a huge fossilized skull of a *Machairodus horribilis* (a subspecies of sabretooth cats; see Figure 3), dated roughly 8.3 million years ago on an old rock in Longjiagou Basin (close to Hong Kong), China. According to Best (2016), the fossilized skull measures about 40cm long, and that translates to an estimated body mass of 405kg for this particular sabretooth cat, with a shoulder height of 1.3m and a body length of 2.4m or 3.1m with its tail. This size and weight have placed the sabretooth cat in the same range as the extinct burly *Smilodon populator* (a lion-sized sabretooth tiger with 18cm saber-teeth) that existed during the Late Pleistocene Epoch, c.129,000-c.11,700 years ago. According to Strauss (2019), *Smilodon* thrived for an extended period in prehistory, spanning from the Pliocene epoch until roughly 10,000 B.C. when the emerging human population hunted these creatures to extinction, potentially contributing to *Smilodon*'s demise by depleting its prey. In today's comparison with present large mammals in the current Anthropocene (Greek for "new human era") Epoch - popularized by the late Nobel laureate Paul Crutzen (b.1933-d.2021) in 2000 - the *Machairodus horribilis* is roughly the same size as a male polar bear. According to Stapleton (2021), polar bears weigh 181-454kg more and are about 30cm taller when on all four. When compared with the Siberian Tiger, which is the largest tiger sub-species, weighing up to 318kg, the largest polar bear weighs up to 771kg, heavier than the Siberian Tiger (All units of measurement use the Metric System).



Figure 3. An artist's impression of the head of  
A *Machairodus horribilis* (Hutzler, 2018)

Although the skull was crushed, but not too badly, the Chinese team of paleontologists was able to identify the menacingly large extinct sabretooth cat as a *Machairodus horribilis* that existed during the Late Miocene Epoch, c.11,630,000-5,333,000 years ago, in the northwestern region of China. A comparison between the Chinese and the classical European *Machairodus* species based on the *Machairodus horribilis* erected by Schlosser (1903) has been made and this attempt was traced back to the isolated teeth purchased from some drugstores in China (see Zhan-Xiang & Jin-Yi, 2008, for detail). According to Roberts (1839), the *Machairodus horribilis* is a genus of large machairodontine sabretooth cats that once roamed Africa, Eurasia and North America during the late Miocene. It came from the sub-family *Machairodontinae* where it “gets its name and has since become a wastebasket taxon<sup>5</sup> over the years as many genera of sabretooth cat have been and are still occasionally lumped into it” (Wikipedia contributors, 2022b, para. 1).

According to Black (2016), *Machairodus horribilis* is the biggest sabretooth cat to date but “[I]t would be a mistake to treat *Machairodus horribilis* just like any other sabretooth cat, though” (Black, 2016, para. 4). While the *Machairodus horribilis* shared the long, serrated fangs and other modifications seen in its relatives, such as *Smilodon gracilis* (smallest among them and were found in eastern North America), *Smilodon fatalis* (found in North and South Americas) and *Smilodon populator* (largest in South America; see Figure 4 below), the *Machairodus horribilis* had a relatively small gape (Deng et al., 2016). The sabretooth cat could only open its mouth to about 70° (smaller gape), comparable to what the lions of today are capable of, rather than the ludicrous 120° (wider gape) *Smilodon*, which is an Ice Age sabretooth cat, could achieve. Along with differences in muscle

<sup>5</sup> Wastebasket taxon (also known as wastebin taxon, dustbin taxon or catch-all taxon) is a term used by taxonomists to refer

to a taxon whose sole purpose is to classify extinct and living things that do not fit anywhere else.



attachments, the Chinese paleontologists believe that *Machairodus horribilis* might have targeted relatively smaller prey unlike their machairodontine cousins in Africa, Euraisa and America tackled.

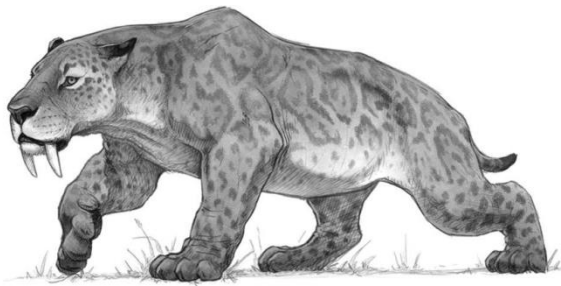


Figure 4. An artist's impression of *Smilodon populator*

The Ice Age sabretooth cat (Fredthedinosaurman, 2018)

Black (2016) argued that *Machairodus horribilis* is a feline that resembled neither modern cats nor extinct sabretooth cats with “[I]ts thin canines ... dictated a targeted throat bite, yet the limitations of its muscles and gape likely limited the size of its preferred prey to a narrower range. To cut it short, big predators did not always pounce upon even larger prey” (para. 5).

#### **Nian: The Chinese Sabretooth Cat?**

Returning to the legendary Nian, its physical appearance as described in the legends, the beast has a body of a bull, whose mass is placed between 498-997kg (heavier than the *Machairodus horribilis*) and certainly bigger in size, a head of a lion (resembling very much like a sabretooth cat), and the horn of a unicorn, which is probably referring to the sabretooth/saber-teeth. Yuan (2006) described Nian as being larger than an elephant with two long horns and many sharp teeth. However, the juxtaposition of both former and latter descriptions seems to match that of the *Machairodus horribilis* to some extent but the weight is too astronomical. According to Stuart (2021), “[E]lephants are the world’s largest land animal. A full-grown African elephant can weigh up to 6 tons (6096kg). They have large, long tusks that they use for digging or fighting with other elephants. These teeth can weigh around 54 kg each and can lift 3630kg” (para. 12-13; all units of measurement are in the Metric System). However, the *Machairodus horribilis* discovered by Deng et al. (2016) weighed about 405kg, which is far less than that of an elephant. In addition, the tusks could have been mistaken to be the long serrated fangs (saber-teeth).

With such a close resemblance between Nian and the *Machairodus horribilis*, who knows that it might be possible that the sabretooth cat did not become

completely extinct but co-existed with the *Homo sapiens* even during the Pleistocene Epoch (lasted from about 2,580,000 to 11,700 years ago), which was the first epoch in the Quaternary Period and the sixth in the Cenozoic Era. Taking into consideration that Peking Man (originally named *Sinanthropus pekinensis*), now more commonly recognized as *Homo erectus pekinensis*, whose remains were unearthed between 1921 and 1927 at Zhoukoudian, near Beijing, China, is estimated also to exist during the Pleistocene era (dating back approximately 250,000 to 400,000 years ago) (Chang, 1962), it is highly likely that both the sabretooth cat and Peking Man co-existed side-by-side and probably also confronted each other in many encounters.

Whatever the physical appearance of Nian, its description could have been distorted over a long period of time as its legend(s) were passed down from one generation to the next. The recent discovery of the *Machairodus horribilis* in Longjiagou Basin, China, has excited many people from different walks of life including researchers from varied fields of specialization, evolutionists, creationists as well as folklorists. More importantly, the discovery has proven this species of extinct big cats did roam at some point of time in China (Chinese: 中國/中国, which means “middle country”; pinyin: Zhōngguó). Though conspiracy theorists as well as creationists might claim that humans probably co-existed with *Machairodus horribilis* as depicted in Chinese folklore, we would not be able to prove or disprove such a possibility.

Cole (2007) argued that many references in creationist literature have pointed to the historical evidence of dinosaurs as well as early mammals (e.g., woolly mammoth, mastodon, woolly rhinoceros, giant sloth and sabretooth cat) and homo sapiens living together such as the following: (i) petroglyphs or prehistoric rock carving or etchings (e.g., Natural Bridges National Monument, Utah); (ii) unexplained sightings by tribesmen, such as the natives living in the deep jungles of South America reported sightings of a terrifying creature called Mapinguari that resembles the long extinct giant ground sloth known as Megatherium (Rohter, 2007), and also the sightings of a supposedly surviving sauropod dinosaur nicknamed Mokele-mbembe in the dense jungles of Congo (Gibbons, 2002); (iii) legends and stories of dragons in Europe; and (iv) frequent use of the dragon motif by the Chinese (Ham, 1998, see pp. 31-52; Ham, 2001, see pp. 35-39). However, one striking physical and historical evidence in Asia that has been rarely mentioned is

“the bas-relief picture of a dinosaur found in the ruins of Angkor outside of Siem Reap, Cambodia” (Cole, 2007, para. 1; also see Figure 5 below).



Figure 5. A photograph was taken of an 800-year-old

#### Stegosaur-like bas-relief

The bas-relief carving of a stegosaur (see Figure 5) from the 12<sup>th</sup>-13<sup>th</sup> century Ta Prohm Temple in Angkor, Cambodia, has attracted much attention worldwide and the iconograph has become widely known in the biblical creationist community as a possible artistic depiction of a recently living stegosaur. According to Cedar (2017), the systematic excavation of dinosaur remains is a very recent development (in the early 19<sup>th</sup> century) and that accurate reconstructions of dinosaurs have only been accomplished in recent decades. Hence, in the case of the stegosaur-like bas-relief carving mentioned here, the possibility that this stegosaur-like carving represents a 12<sup>th</sup>-13<sup>th</sup> century reconstruction based on fossils is highly unlikely (Kuban, 2014). According to Bakkar (1986), the vertical nature of stegosaur's plates has only been established within the last few decades. As a result, creationists have strongly argued that the most likely explanation for this carving is that “the ancient Khmer people's saw and depicted a living stegosaur, confirming the view held by many biblical creationists that dinosaurs and humans coexisted in the recent past” (Cedar, 2017, p. 39).

However, Cedar (2017) cautioned the creationists not to be too quick to jump to their conclusion. There are several issues to be addressed: “the ambiguity of the back structures as ‘back plates’, the lack of tail spikes, and the clear possession of an abnormally-large head with a pair of some type of protrusions (either external ears or horns), neither of which are found in stegosaur, provide more than sufficient grounds for biblical creationists to at least question the identification of the bas-relief carving at the Ta Prohm temple at Angkor, Cambodia, as a post-Flood depiction of a stegosaur” (Cedar, 2017, pp. 42-43).

## CONCLUSION

The legend of Nian is deeply rooted in Chinese folklore and tradition. While it is a fascinating idea that it might have been inspired by an extinct species like *Machairodus horribilis*, the Chinese folklore often blends reality and imagination, making it challenging to definitively link it to a specific historical period. The concept of coexistence remains a high possibility, as ancient cultures often shared landscapes with now-extinct animals.

In the same manner of approach, the author of this paper caution that we should not be too prompt to say that Nian could be the extinct sabretooth cat, more than just an allegorical representation of *Machairodus horribilis*. There remains an incomplete match or even a mismatch between the legendary Nian and the extinct sabretooth cat based on the description given in the various legends as well as the fossil recently found by the team of Chinese paleontologists. If we were to base solely on the legend(s) of Nian, our argument could become faulty - from false premises (an untrue proposition that constitutes part of the basis of a logical syllogism) or a wrong line of thinking or reasoning such that the conclusion drawn is also incorrect: i.e., the Chinese people of antiquity co-existed with *Machairodus horribilis* alias *Nian Shou* during the period of Shànggǔ!

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