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# Historical Changes of *Ginkgo Biloba* L. Culture

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**Abstract** *Ginkgo Biloba* L. is a rare species endemic to China, strengthening the study of Ginkgo culture is of great significance to eco-economic development. This paper uses the historical research methods to study the Ginkgo and its cultural development process in China. According to the characteristics of the development of Ginkgo culture, the process can be divided into three stages: Shang and Zhou Dynasties to the Northern and Southern Dynasties (which is named theological era), Sui and Tang Dynasties to early Qing Dynasty (which is named the literature era), and the modern China which is named the scientific era. The history of Ginkgo culture is a history of Ginkgo being gradually recognized, and the Ginkgo culture's connotation and extension are gradually deepened and developed. The construction of Ginkgo today's culture should be in the inheritance of historical culture, and combined with the needs of the times comprehensive innovation, take the science and human harmonious development road.

**Key words** *Ginkgo Biloba* L. culture, Shang and Zhou Dynasties, Northern and Southern Dynasties, Sui and Tang Dynasties, Early Qing Dynasty

## 1 Introduction

*Ginkgo Biloba* L. and the Ginkgo culture occupy an important place in China's forestry economy and culture. As for the Ginkgo culture, Zhao Rendong has done some research and thought that the Ginkgo culture is a special cultural phenomenon generated by integration of its long history and species characteristics with its spiritual sustenance and symbolization. It includes Ginkgo literature, art, aesthetics, dietetics, and ecology *etc*<sup>[1]</sup>. Currently researchers have put forward general overviews in the order of China dynasties according to the age of ancient Ginkgoes. For example one of them think "Cultivation of Ginkgoes, according to historical documents, started from Qin and Han Dynasties, prevailed in the Three Kingdoms period, expanded in Tang Dynasty and popularized in Song Dynasty"<sup>[2]</sup>. However, few people have done detailed historical stages analysis on the Ginkgo culture. This paper uses the historical research methods to study and review the historical stages, characteristics and future of the Ginkgo culture.

## 2 Shang and Zhou Dynasties to Northern and Southern Dynasties: Theological Era

Before Northern and Southern Dynasties, there was no clear record about Ginkgoes in historical documents, therefore it's hard to determine what it was called in this period. Guo Moruo in *Ginkgo* said "I can not find your names in Chinese Classical literatures. I have find neither a poem by any Chinese poet singing praising for you, nor a paint portraying your figure". Based on current study results, researchers tend to take Tianmu Mountain in Zhejiang Province, Dahong Mountain and Shennongjia Mountain in Hubei Province as the central origin of Ginkgoes. According to age of existing ancient Ginkgoes, it

can be derived that planting history of Ginkgoes starts from Shang and Zhou Dynasties, and beginning of the Ginkgo culture can be traced back to the Shang and Zhou Dynasties period. From the perspective of human's planting history of Ginkgoes, it can be found that at the end of Han Dynasty and in the Three Kingdoms period, Ginkgoes have been widely cultivated in the drainage basin of the Changjiang River and sporadically planted in the drainage basin of Yellow River. In the period of West Jin, Northern and Southern Dynasties, in the middle and low reaches of Yellow River, Ginkgoes were increasingly planted<sup>[1]</sup>. Till now, these areas are still the main producing regions of Ginkgoes. In the academic community, it is generally considered that Ping refers to Ginkgo in *Ode of Shanglin Garden* by Sima Xiangru of the Western Han Dynasty, also, Pingzhong refers to Ginkgo in *Ode of Capital of Wu Kingdom* by Zuo Si of Jin Dynasty, in the line of "Durable as Pingzhong and straight as Junting; strong as Pine and modesty as Gudu"<sup>[3]</sup>. With the development of folklore and archaeology, new data is provided for study of the Ginkgo culture history. Some scholars think that Shemu trees in Juxian County, Shandong Province are actually Ginkgoes, and Ginkgo worship has prevailed in this area since ancient times<sup>[4]</sup>. According to archaeological data, some of the Han Dynasty stone reliefs in Xuzhou of Northern Jiangsu, and Linyi and Zaozhuang in Southern Shandong have represented plants, a large amount of which are Ginkgoes. For example, among the Han Dynasty stone reliefs recorded in the book *Han Dynasty Reliefs of Xuzhou*, there are 22 reliefs representing trees, and 16 of them represent Ginkgoes<sup>[5]</sup>. Among Stone reliefs in Pizhou, there is one relief taking Ginkgoes as its subject. On the relief, there are two Ginkgoes echoing each other at a distance, whose leaves look extremely like that of Ginkgoes. Around these two trees, 4 people with godly facial expressions seem to be worshipping these trees. Such image design may be related to the symbolism of Ginkgoes which are considered as auspicious trees symbolizing prosperous offspring and tremendous welfares<sup>[6]</sup>. Till nowadays, there are

still various types of Ginkgo worship in China<sup>[7]</sup>. Another important discovery about the Ginkgo culture is that brick murals of "Seven Sages of bamboo forest and Rong Qi" were excavated in a coffin chamber in Xishanqiao, Nanjing, in April, 1960. In addition, in some painting and calligraphy works of Wei, Jin, Northern and Southern Dynasties there are images of Ginkgoes. For example, *Painting of Ode to the Goddess in Luoshui* by Gu Kaizhi in East Jin Dynasty is designed with Ginkgo as the theme<sup>[8]</sup>. In this period, people come to recognize, cultivate and notice Ginkgoes in the production areas. They gradually realized the longevity and straightness of Ginkgoes, began to worship it, and took it as their spiritual sustenance. James George Frazer said in his work, *The Golden Bough, A Study in Magic and Religion*, witchcraft is built on two thought bases, namely the law of similarity and the law of contact<sup>[9]</sup>. It should be noted that ancient Ginkgoes were always planted in temples, and this tradition has been passed down. For example, in Beijing, many Ginkgoes are closely related to temples<sup>[10]</sup>. This tradition justifies our thought that Ginkgoes are closely connected to Chinese traditional culture, especially religion culture. However, considering current study results, our study on the relationship between the Ginkgoes culture and traditional Chinese cultures is far from enough.

### 3 Sui and Tang Dynasties to Early Qing Dynasty: Literature Era

As Sui Dynasty is transient, few poems and verses at that time have mentioned, Ginkgo in Tang Dynasty, Ginkgoes had been widely planted. The name "Yin Xing" began to appear in Yuan Zhen's poem, but this name can't be identified to refer to Ginkgo. Currently, scholars commonly think that in Tang Dynasty Ginkgo was called "Pingzhong". To Song Dynasty, Ginkgoes had become a tribute for Chinese emperors, and Xuzhou area seemed to be a region of this tribute specified by emperors. Since then ginkgoes had become popular, and with the capital as its center, they were widely planted. Favor of emperors and aristocrats towards it greatly influenced the development of the Ginkgo culture. Litterateurs appraise Ginkgoes and endow them with emotional symbolism. In traditional Chinese culture, goose feather bears the meaning of "gift of low price but great friendly affection", and cyprinoids also symbolizes care for friends and families. In those poetry and verses, Ginkgoes were considered the same as goose feather and cyprinoids to express best wishes for friends and families. In Southern Song Dynasty, some literati even gathered to compose poems to appraise Ginkgoes, which gradually became a literature phenomenon. Li Qingzhao, a poet of Southern Dynasty endowed Ginkgoes with more symbolism of romantic love. Chao Buzhi in Song Dynasty described the scene of people planting Ginkgoes in Longxing Temple of Sui Dynasty. It shows that Ginkgoes had become an object for literati to gather to sing appraisal for it. Wang Jixian in Southern Song Dynasty wrote *Correction and Annotation to Shaoxing Materia Medica Herbal*. He added an entry of Ginkgo to it, which shows that at least in Southern Song Dynasty, Ginkgoes had been listed in

pharmacopoeia and became a Chinese traditional medicine<sup>[11]</sup>. Therefore, it can be seen that in Southern Song Dynasty, Ginkgo nuts had become a popular food. In poems and verse of that time it was also reflected that Ginkgoes had become a delicious food as pawpaw, Chinese dates and chestnuts. recognition of Ginkgo's function improved its value, and farmers vigorously introduced and planted them for its great economic benefits. In the dominion of Southern Song Dynasty, Ginkgoes were widely planted, and the species of Yizhou, Guangxi Province was the best. In excavated merchant ships of Song Dynasty, Ginkgoes prepared for shipment to Northern areas for sales were found, which also verified that there was Ginkgoes trading in Song Dynasty. In Yuan Dynasty Ginkgoes were commonly used for medical purpose. Ginkgo tree would produce seeds (which look like fruits) with silver color sarcotesta, hence it got its Chinese name Yin Xing (which means silver fruit in Chinese language). To Ming Dynasty, it was generally called Bai Guo (in Chinese Language, it means white fruit), and was recorded in *Compendium of Materia Medica* by Li Shizhen. To sum up, in this period, people had increased recognition of Ginkgoes and expanded their planting range compared with last period. They had deepened their understanding of the aesthetics, economic and medical values of Ginkgoes, as a result of which Ginkgoes gradually got recorded in traditional Chinese medical books, pharmacopoeia, agricultural books, manuals and local chronicles. Some scholars began to research on its historical origin. In literature, Ginkgoes had become a carrier for them to express their sentiments and a typical literal image of Chinese culture, and its connotation gradually got richer. In main producing regions of Ginkgoes, people contacted more frequently with Ginkgoes, so their folkways and folk-customs related to Ginkgoes gradually increased. Ginkgo was considered as a holy tree, king of trees. Many existing ancient Ginkgoes were planted in this period according to their age, while many legends about Ginkgoes can be also traced to this period, such as myths, legends, tales and idioms collected in *Ginkgoes in Anlu*<sup>[12]</sup>. Many local folk-customs are also talked about in *Studies on Tancheng Culture*<sup>[13]</sup>. In these myths, legends, folk-customs, focuses are laid upon Ginkgoes' economic and medical values, which showed people's love and appraisal for Ginkgoes.

### 4 Modern China: Scientific Era

Since the modern times, people's eagerness for knowledge and development of value has deepened people's knowledge about Ginkgoes in this period. In late Qing Dynasty, Ginkgoes were more widely planted. During the reign of emperor Guangxu, the scene of Ginkgoes harvest was described as "Ships jammed the traffic, with their sails interleaving. They are carrying Ginkgoes for sales far away"<sup>[14]</sup>. In the past, most Ginkgoes of various counties along the upstream of Qiantang River always gathered on Nanxing Bridge of Hangzhou, carried in large amount by privately-owned boats, which was comparable with walnut meat in Northern China<sup>[1]</sup>. During the period of the Republic of China there were articles specially introducing

Ginkgoes. In 1934, Zhou Jianren wrote an article *Ginkgo Tree*, discussing from baskets for selling Ginkgoes, to Ginkgo trees, name and history of Ginkgo, as well as the dispute about whether wild Ginkgoes exist or not. Ginkgo trees were planted along streets from the 1930s in Dandong, Liaoning Province. And nowadays Ginkgoes are widely planted in campuses, and along some roads of Beijing. In 1935, Professor Zeng Mian published an essay *Ginkgoes in Zhuji, Zhejiang*. In it he divided Ginkgoes into 3 types, namely Fuoshou, Meihe and Maling according to the characteristics of their seed fruit and core. He also described and recorded 10 species in it. This is the first scientific research on classification and species resources of Ginkgoes in China<sup>[15-16]</sup>. In 1942, Guo Moruo wrote the article *Ginkgo*, which is full of appraisal for Ginkgoes. After the founding of the People's Republic of China, the scientific research on Ginkgoes is rapid, and the Ginkgo culture research is getting increasing deep and prosperous, with appearance of many scientific research theses and academic monographs. Chinese Society of Forestry, Ginkgo Branch (the former China Ginkgo Research Association) has organized 18 consecutive national academic seminars about Ginkgo, and greatly promoted research on Ginkgo. In recent 20 years, hundreds of publications about Ginkgoes have been published openly in China, and academic works on Ginkgoes tends to become more and more. Literature about Ginkgoes come forward in a great amount. Artists have created many excellent songs and plays to sing appraisal for Ginkgoes and Ginkgo spirit. The traditional opera *Ginkgo Complex* in He'nan has been performed about a hundred times consecutively and is deeply loved by people. The opusculum with singing and dancing, *A Love Story about Ginkgo*, created by cultural workers Wei Xiuliang, Shi Liji et al of Gaomi City, Shandong Province, has been selected as a major play to be performed for the 50th anniversary of China. With the development of China's reform and opening up, commodity economy develops rapidly. As a result, Ginkgoes also expanded a wide market, and become a major forestry industry, as well as an important species of forestry in some areas in China. Governments and people from all social circles have attached more and more importance to Ginkgoes cause. In election for national tree, provincial tree and municipal tree, Ginkgo has also reached top place. In September 2005, Chinese Society of Forestry announced that in the national tree election activity on the Internet, the voting results of 7 candidate species for national tree, namely Ginkgo, metasequoia, dovetree, eucommia, pagoda tree, arborvitae and camphora, showed that among 1 790 000 ballots and letters received during this activity, 1 770 000 was for Ginkgo, *i. e.* 98.91% of the total ballots, while the other species only had 19 575 votes, *i. e.* 1.09%. Nearly 99% of electorate chose to take Ginkgo as the national tree of China. Today, the Ginkgo culture is developing most deeply in material and technology levels; however, comparatively speaking, research on the spiritual, behavior and system aspect of the Ginkgo culture is not so satisfactory. Fortunately, some far-sighted people have realized the importance of studying and developing comprehensive Ginkgo culture. Some

study about the Ginkgo culture is subsequently carried out and moved forward. The most important is that it has endowed Ginkgo with spiritual and culture values in the modern time<sup>[17-18]</sup>.

## 5 Prospect of the Ginkgo Culture in the Future: Harmonious Era

We have now seen different characteristics of the Ginkgo culture in different eras. It can be concluded that Ginkgo has a process of being gradually known to people, and accordingly the Ginkgo culture also has a process of gradual development. The Ginkgo culture has different characteristics in different eras, including the theological era before Northern and Southern dynasty, the literature era from Sui and Tang Dynasty to early Qing Dynasty, and the scientific era since modern China. Looking forward to the future, the Ginkgo culture is bound to enter a prosperous, harmonious development new era. (i) With promotion and improvement of the Ginkgo industry, the Ginkgo culture in the future must be more prosperous. To this day, there are only a few areas where whole plots are used to plant Ginkgoes, including Taixing and Pizhou of Jiangsu, Tancheng of Shandong, Changxing and Zhuji of Zhejiang, Anlu and Badong of Hubei, Xinxian and Songxian of He'nan, Jinzhai and Xuanzhou of Anhui, Lingchuan and Xing'an of Guangxi *etc.* People are master of history, and they are also masters of culture. Only when Ginkgo is utilized and appreciated by the people can its culture significance be exhumed and innovated. This can be deeply verified by the Ginkgo culture in Pizhou. Pizhou has a long history of Ginkgo planting and there are many ancient Ginkgoes left. Accordingly, the Ginkgo culture in Pizhou region is very colorful. There are not only large Ginkgo forests, legends, tales, and customs, but also classic culture about Ginkgoes. This can be seen as a beneficial cycle with Ginkgo industry promoting ecology, ecology promoting culture and culture promoting ecological economy. Therefore, in the future the Ginkgo culture shall get prosperous together with the Ginkgo and complement each other. At present, our primary task is to get Ginkgo known and loved by people more deeply and widely, and deepen each level of the Ginkgo culture. (ii) From the perspective of academic study, future Ginkgo culture has much room for deepening and expanding. Since the history of Ginkgo is not completely clear, not even its name before Song Dynasty, and in addition recognition, development and utilization of Ginkgoes' economic, biological, medical, ecological and aesthetics values was a gradual developmental process in history, there was gaps in the development of the Ginkgo culture. In the ancient time, people's knowledge about Ginkgo was relatively superficial. Currently research on various aspects the relationship between the Ginkgo culture and traditional Chinese culture is far from sufficient. With the advancement of science and technology, in-depth research will be made on Ginkgo science and technology and the Ginkgo culture, and various values of Ginkgoes shall be recognized and applied on a larger scale. (iii) In future the Ginkgo culture will be more powerful and full of vitality, but requiring scientific guidance. Based on

existing research results, there are at least two upsurges of the Ginkgo culture: one in Song Dynasty, when Ginkgoes became a tribute for Chinese emperors, and Ginkgo trees become a common emotional media; the other is those election activities for national, provincial and municipal trees as well its scientific research. In recent years, Ginkgoes are rather widely planted throughout China, and even become a fashion. However, it also have raised some problems. It is of great significance to study the development history of the Ginkgo culture and explore the spiritual core of the Ginkgo culture and its future trend, for the exploration and construction of today's Ginkgo spirit and even the Ginkgo culture.

Each age has its own demands, mission and limitation. Based on the above review of history of the Ginkgo culture, we can find that the Ginkgo culture has been deepening and developing continuously, and each age has its own orientation for the development of the Ginkgo culture. The Ginkgo culture doesn't spring up out of nowhere; instead, it is built upon the foundation of comprehensive in-depth scientific knowledge and powerful Ginkgo economic industry, and is consistent with the ideological trend. Only through integration with the needs of the current age and national characteristic, can we make the Ginkgo culture have its own foundation and specialty, and not let it become isolated. Though currently the Ginkgo culture has great vitality, the promotion and research on Ginkgo and the Ginkgo culture is far from sufficient. The strong call for the spiritual connotation of the Ginkgo culture at present has made the construction of the Ginkgo culture urgent. To develop the Ginkgo culture, we should inherit legacy of history, further develop each aspect of the Ginkgo culture to realize coordinated development. Facing with the reality, we will further deepening the Ginkgo culture at this new age, insist on sustainable scientific development, and create an open flexible system of the Ginkgo culture. In the future the Ginkgo culture will enter a new age of harmonious development of human and the nature, technology and culture.

(From page 101)

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