



# Research on the Timber Frame Paintings of Huangshixiaozong in Kulangsu

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**Abstract.** The Huangshixiaozong 黄氏小宗 is now known as Kulangsu's 鼓浪屿 earliest traditional wooden ancestral hall with a high historical, artistic and cultural value. Its time-honored timber frame paintings possess distinctive regional features of the southern Fujian 福建 area, and they serve as rare extant examples for research on this topic. Because of the limited lifetime of paint and some colors, paintings are easy to fade and disappear, thus it is important to do urgent studies to save them. Based on detailed investigations of Kulangsu's traditional architecture and a restoration of Huangshixiaozong, this paper conducted a preliminary analysis on the colors and patterns of the paintings, and restored the characteristics and styles of the paintings, so as to provide reference points for related research and restoration plans.

**Keywords:** Kulangsu · Huangshixiaozong · Traditional architecture · Ancestral hall · Paintings

## 1 Introduction

Oil painting is an important part of traditional building technology and the carrier of traditional culture. Therefore, it is of profound significance to do systematic research on it. However, it can be challenging to do so because of its physical vulnerability. Although traditional buildings in southern Fujian are better-preserved and have the necessary prerequisites for the study of oil painting, relevant studies are carried out late and comprehensive research results are relatively few. Currently, a large number of ancient building protection and repair works are often caught up with a shortage of funds.

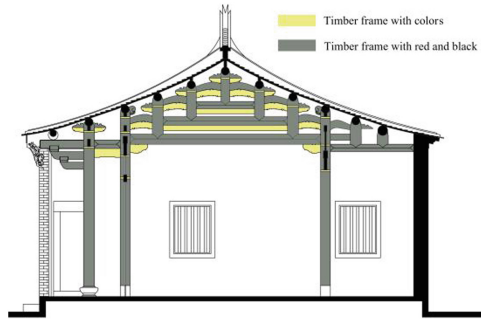
The Huang clan's ancestral hall (hereafter referred to as "Huangshixiaozong") is located at 66 Market Road, Kulangsu, Xiamen 厦门 City, Fujian Province, and covers an area of about 370 m<sup>2</sup>, with a floor area of 200 m<sup>2</sup>. As far as we know, it is the extant traditional wooden building in Kulangsu with the longest history. Its timber frame still bears the original paintings with high historical, artistic and cultural value. In January 2016, The Secretariat of China's UNESCO National Committee officially recommended "Fujian Kulangsu" as a 2017 cultural heritage project. In April 2016, under the supervision of the Kulangsu Administrative Committee, related authorities started to conduct professional repair works for the building. After removing the most recently-added parts of the building, its original paintings came into sight (Fig. 1, Fig. 2). Based on the study of the color compositions and patterns of Huangshixiaozong's timber frame, this paper

summarizes the basic characteristics and artistic value of the timber frames in this southern Fujian religious facility to provide a basis for future research, as well as assist in the elaboration of plans for its protection and repair.



1.Da-tong 2.Er-tong-jin 3.Er-tong 4.San-tong-jin 5.San-tong 6.Shu-jin 7.Shu-mu 8.Shu-cao 9.Central-ling 10.Yuan-guang  
11. Bu-tong 12.Da-mei 13.Jue-shu 14.Front chu 15.Gua-tong 16.Tou kung 17.Ji-she 18.Back chu 19.San-ti 20.Pi-gu  
21. Shang-ge 22.Hua-chuang 23.Back da-mei 24.Back bu-tong

**Fig. 1.** Diagram of terms for the various timber frame components.



**Fig. 2.** Distribution map of paintings on the timber frame.

## 2 Paintings on the Timber Frame

### 2.1 Timber Frame

In terms of colors, red and black are the main tones for the timber frame of Huangshixiaozong, and the key rule is “red at the bottom, black by the side”. The patterns mainly appear at the *da-tong* 大通, *er-tong* 二通, *san-tong* 三通, *bu-tong* 步通, *da-mei* 大楣, *jue-shu* 桷梳, *tou-kung* 痴仔, *ji-she* 鸡舌, *shang-ge* 上格, *hua-chuang* 花窗 and other components. The bottom of the *tong* is red, but its two sides and the *yu-wei-cha* 鱼尾叉

were painted black.<sup>1</sup> There is no color on the top surface of the *tong*. The *chu* 柱 was painted black, and the *pi-gu* 皮箍 above the *chu* was decorated with a green “snakeskin pattern”<sup>2</sup> featuring white dots in an ordered arrangement (Figs. 3 and 4).



Fig. 3. Snakeskin pattern on the *pi-gu*.

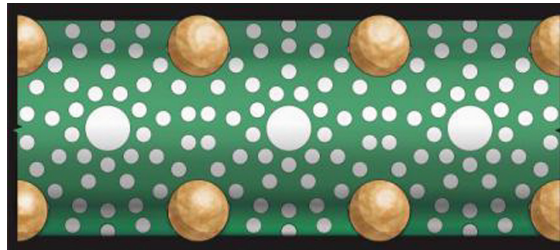


Fig. 4. Restored illustration of the snakeskin pattern.

## 2.2 *Shu-Mu, Shu-Jin, Shu-Wei, Shu-Cao*

Huangshixiaozong’s *shu-mu* 束木 were painted mainly in black, with blue residuals on the surface. The middle of the *shu-mu* has an “ear”-shaped pattern, referred as *hu-lu-piao* 葫芦瓢<sup>3</sup> by local craftsmen. The *hu-lu-piao* did not have a ground color (nor white paint), but was decorated in dark green abstract patterns which reflect landscape and bird motifs. (Figures 5 and 6).

In the *shu-jin* 束巾 and *shu-cao* 束草 red and black were used as ground colors. On top of the ground colors base, blue, green, vermilion,<sup>4</sup> white and gold colors were added. The roll grass patterns of the *shu-jin* were alternately painted with blue and green.<sup>5</sup> The

<sup>1</sup> *Yu-wei-cha*: it is the curved triangular component at the end of the *tong*, shaped like a fish tail, where the most usage of red occurs in the traditional ancestral halls of southern Fujian.

<sup>2</sup> “Snakeskin pattern” is a kind of pattern painted on the *pi-gu*, named for its snake-like image.

<sup>3</sup> The word *hu-lu-piao* comes from interviews with Wang Shimeng 王世猛, one of the intangible cultural heritage inheritors with special know-how on this matter.

<sup>4</sup> In this article, “vermilion” means that the mixture of red and yellow is not uniform, resulting in a clear distinction between both colors.

<sup>5</sup> The method for applying colors is the same as that found in official paintings of the Ming and Qing dynasties. In a composition, the use of blue and green to contrast with each other can make the picture look more vivid or colorful.



Fig. 5. Photo of *shu-mu* and *shu-jin*.

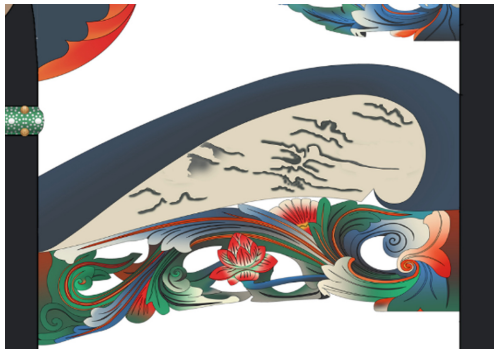


Fig. 6. Restored illustration of *shu-mu* and *shu-jin*.

top and edge parts of roll grasses were embellished with a white halo. The stems of roll grasses were mostly covered with gold and vermilion, but part of the roll grasses had a border of gold. There are two timber frames inside the Huangshixiaozong's room. The center of the left frame was painted with a "Lotus" pattern, and the center of the right frame was painted with a "Ganoderma" pattern. The ground color of the lotus is red, and the petals are white at the junctions. The ground color of the Ganoderma is red, with golden borders. The top and the right lower parts of *shu-jin* had an embellishment of fan-shaped flowers. The center of each flower is yellow and the top of the flower is in red. The surfaces of *shu-cao* and *shu-wei* 束尾 had a lot of blue and green residuals, mainly in cool tones, and the color expression of the *shu-cao* is similar to that of the *shu-jin* (Figs. 7 and 8).

### 2.3 Tong-jin

Huangshixiaozong has two kinds of *tong-jin* 通巾: *er-tong-jin* 二通巾 and *san-tong-jin* 三通巾. The ground color of the *tong-jin* is red, and the patterns were painted with green,



Fig. 7. Photo of *shu-wei* and *shu-cao*.

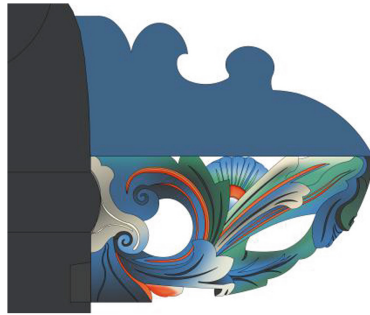


Fig. 8. Restored illustration of *shu-wei* and *shu-cao*.

white and gold. The *er-tong-jin* was engraved with abstract and rectilinear grasses embellished by gold and yellow, and surrounded by “bat” and “treasure” patterns (Figs. 9a, 9b). The *san-tong-jin* was engraved with concrete and roll grasses embellished by gold and yellow, and surrounded by “Ganoderma” patterns (Figs. 9c, 9d). Both grass patterns were green, with a border of gold and white halo.

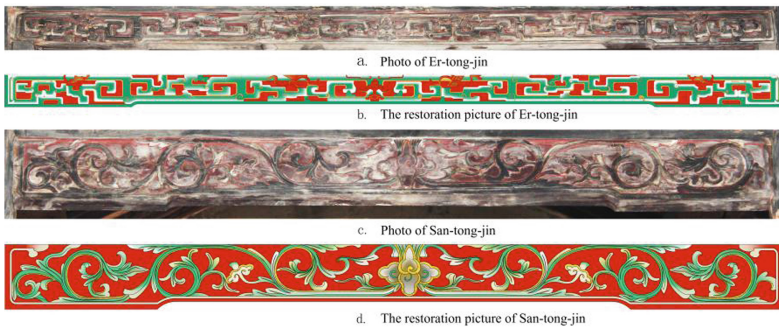


Fig. 9. Decorative patterns in the *tong-jin*.

The patterns of *er-tong-jin* and *san-tong-jin* seemed quite different, but they contained certain rules. Through the extraction of the “grass” module unit, we can see that they were basically the same pattern (Figs. 10 and 11). The *san-tong-jin*’s basic composition is relatively simple. The main vein was bifurcated, and then the second vein was bifurcated again, followed by the third one. Only one of the two veins obtained at the second bifurcation can be bifurcated again. The *er-tong-jin*’s expression of grass bifurcations was the same as in the *san-tong-jin*. The only difference between them was that one used straight lines and the other one used curves.



Fig. 10. Analysis diagram of *san-tong-jin* (pattern extraction).

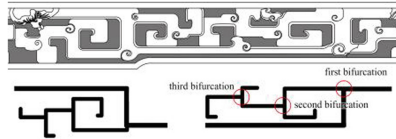


Fig. 11. Analysis diagram of *er-tong-jin* (pattern extraction).

### 2.4 Yuan-guang

The pattern of Huangshixiaozong’s *yuan-guang* 圓通 is two dragons (Fig. 12). Most of its surface pigments were peeled off, but by analyzing the residual colors, it can be basically determined that the *yuan-guang* has no ground color, but the surface was directly decorated with white, green, blue and gold. The color of the dragon’s back is dim, suggesting dark blue, according to other cases found in Kulangsu. The abdomen is white, and the color between white and blue is bluish green. All the patterns have a border of gold (Figs. 13 and 14).



Fig. 12. Photo of *yuan-guang*.





Fig. 13. Restored illustration of *yuan-guang* (a).

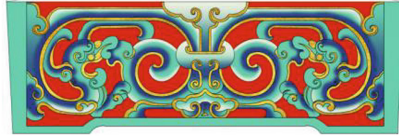


Fig. 14. Restored illustration of *yuan-guang* (b).

*Yuan-guang*'s groove surfaces are left with some white pigment darkened by the passage of time. According to the existing examples, traditional buildings in southern Fujian rarely use white as a ground color. The restored illustration (a) also differs greatly from *tong-jin* in their color patterns. Therefore, the ground color of the restored illustration (b) was changed into red to unify with *tong-jin*'s hue.

## 2.5 San-ti

Huangshixiaozong has six *san-ti* 散体 painted with green, white, gold, vermilion and red. The ground color of the *san-ti* is red. The roll grasses were painted with green with an embellishment of white halo. The main veins of roll grasses were covered with gold and vermilion, but the secondary veins of roll grasses were covered with green. The ground color of the lotus is red, and the petals are yellow at the junctions. The tips of the lotus have golden embellishments. The embellishment of the *san-ti*'s fan-shaped flowers is the same as the *shu-jin* (Figs. 15 and 16).



Fig. 15. Photo of *san-ti*.

## 2.6 Bian-zuo

The pattern of Huangshixiaozong's *bian-zuo* 匾座 is also roll grass, with a ground color of red. The roll grass has a border of gold and was painted green inside with white halo (Fig. 17 and 18).



Fig. 16. Restored illustration of *san-ti*.



Fig. 17. Photo of *bian-zuo*.



Fig. 18. Restored illustration of *bian-zuo* (panorama).

### 2.7 Central-Ling

Most of Huangshixiaozong’s *ling* 標 have no color, except the central-*ling* 脊圓 which has a painting in the middle. The ground color of the painting is red, with golden “derivative-*bagua* 后天八卦” and “*hetu* 河图”<sup>6</sup> patterns (Figs. 19 and 20). At the edge of the painting there are three *gu-tou* 箍头 separated by gold lines. The ground color of the first *gu-tou* is khaki, with a yellow pattern. The ground color of the second *gu-tou* is red, but the color of the pattern is hard to recognize. The ground color of the third *gu-tou* is a blackish green, with a green pattern.

Although the three *gu-tou* are different in colors, all of its patterns are derivations of roll grass with common characteristics. The first and third *gu-tou* are easier to identify, but the second *gu-tou*’s pattern is often mistaken for frets. However, through a compositional analysis, the prototype could be recognized as that of roll grass, and is made up of “roll grass” and “bulge” (Fig. 21).

<sup>6</sup> The combination of derivative-*bagua* 后天八卦 and *hetu* 河图 is very rare. In the traditional architecture of south Fujian, the central-*ling* is often decorated with the patterns of crude-*bagua* 先天八卦 and *luoshu* 洛书. Huangshixiaozong’s derivative-*bagua* and *hetu* are not only beautiful, but also directional.





Fig. 19. Painting on the central-ling.



Fig. 20. Restored illustration of the painting on the central-ling (panorama).

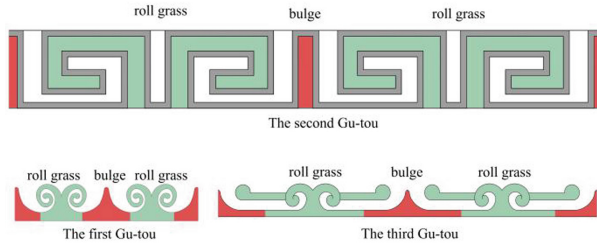


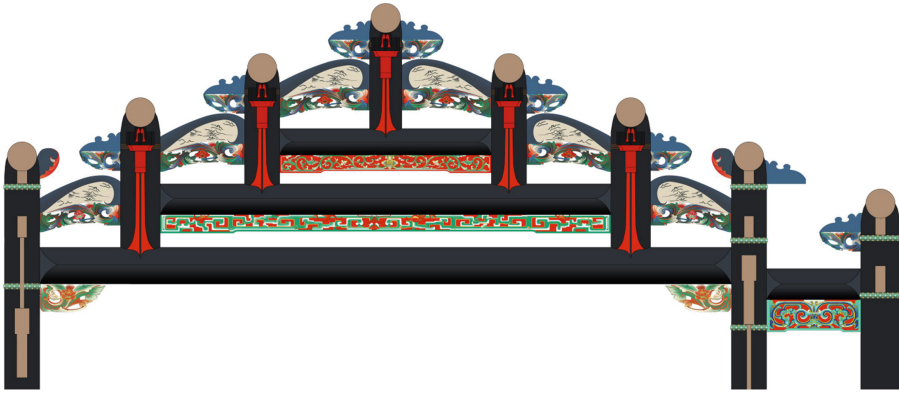
Fig. 21. Analysis diagram of *gu-tou* (pattern extraction).

### 3 Conclusion

The styles of traditional architectural painting decorations in south Fujian can be divided into three categories according to their distribution in the cities of Quanzhou, Xiamen and Zhangzhou. Among them, Quanzhou and Zhangzhou formed their unique decoration styles earlier, due to their long history. Quanzhou was dominated by red and black oil painting decorations, while Zhangzhou would decorate timber frames with ornate paintings. However, Huangshixiaozong, as one of the few well-preserved ancestral hall buildings in Xiamen, contains paintings which are elegant and unadorned, fully combining the characteristics of paintings in Quanzhou and Zhangzhou. They represent important examples for future studies on the transition and integration of Xiamen, Zhangzhou and Quanzhou cultures.

Through the restoration and analysis of colors on the timber frame of Huangshixiaozong (Fig. 22), we can obtain the following principles and rules:

1. The timber frame was mainly painted with red and black, red at the bottom, black by the sides. There is no color on the top surface of the timber frame.



**Fig. 22.** Restored illustration of timber frame painting of Huangshixiaozong.

2. The patterns of the *san-ti*, *tong-jin* and other timber structural components are dominated by roll grasses and dragons. Color decoration is characterized by white halos which are featured at the ends and edges of the patterns. Another characteristic of the color decoration is golden borders.
3. Patterns were expressed in different forms. The central-*ling*'s *gu-tou*, for example, enhances the richness of visual perception.
4. The composition of the roll grass pattern has certain inherent laws.
5. The patterns and composition methods of the color timber frame demonstrate a certain sense of unity.

Since part of the Huangshixiaozong's paintings on the timber frame are well-preserved and with a certain research value, no restoration work was done to the paintings in this renovation. The project preserved their original appearance, therefore leaving a valuable example for follow-up painting studies. The paintings are easy to weather and discolor, so it is urgent to carry out such studies to save the degrading paintings. By taking photos to record the original paintings and reconstructing the original state of the paintings based on residual colors and compositions, we can not only provide visual information for the related research initiatives, but also provide guidance for subsequent renovation works. This is a practical way to study and protect ancient architectural paintings.

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