

## List of Photographs

All photographs by the author, unless otherwise indicated.

### Chapter 1

1-01: A view from the aeroplane above Xi'an in October 2000

1-02: The ladies-in-waiting in the Tomb of the Tang Princess Yongtai

1-03: The ladies-in-waiting in the Tomb of the Tang Princess Yongtai by Tang Changdong

1-04: The polo scene in the Tomb of Zhanghuai is depicted from an angle looking down on the players.

1-05: The green of the tree has 'floated away' from its original position. A specific example of the kind of damage that occurred due to the false assumption that the paint layer was stable.

1-06: Pestle and mortar used for medicine in the Han dynasty; a description can be found in *Handai Wuzhi wenhua ciliao tushuo*. [Su, p 298]

1-07: From [Han1, p 278] number: 70-1-2-3-4 brushes, 70-5 a container for ink, 70-6 a container for water.

1-08: The tomb of the Prince Yide: the tumulus has a dou shape.

1-09: A dou is a measure of grain.

1-10: The Que of the west wall of the Yide tomb: plate 4 in [Zhou 1]

1-11: A modou, 墨斗, carpenters' tool used for drawing long lines. A thin rope on the reel runs through the container inside and is coated with ink or chalk.

1-12 The various structures of Que known in the Han dynasty. From [Su, p 181]

1-13: An example of a renzhigong, which demonstrates the complexity of such beamwork. from: *Essays on archeology of Architecture in China*, Yang Hongxun, *Wenwu chubanshe*, 1987, p 229.

1-14: By the Han dynasty, many different brick-work structures were already in use. [Su, p 177, 44/19.]

1-15: The ceiling between the main tomb chamber and the front tomb chamber in the tomb of Yide is covered with images of flying cranes.

1-16: The lower part of this photograph shows the square slabs on the floor of the first chamber in the Yide tomb. Above it can be seen one of the few original murals that is still in situ; it was unfinished and large sections were missing. These are now filled in with white plaster.

1-17a+b: The inscription, supposedly by the painter Zhang Bian, on the Yide tomb.

1-18: An example of the 'drawn' lines in the tomb of Zhanghuai.

1-19: Cross-section of the tomb of Princess Yongtai. The numbers 1-6 in the plan represent the sky mirrors; number 7 is the main tomb chamber; number 8 is the front tomb chamber; number 9 is the stone door; and 10 is the sloping passage way.

1-20: The section depicting the guard of honour, which has been removed from the wall of the Yongtai tomb and is at present exhibited behind glass in an exhibition hall above ground on the site of the original location of the tomb.

1-21: A schematic drawing of the constructions on the murals in the tomb of Li Shou. [Zhao 1, p 199]

### Chapter 2

2-01: Riding procession II, from the tomb of Li Shou, 203 X 147 cm, 8 riders on horses.

Colours of the 5 horses in the front: 3 white, 1 red, and 1 purplish red. For a description of the constructions in the wall paintings in the Li Shou tomb see Chapter 1. From: *Yin*

Shengpeng, *The Cream of Original Frescoes from Tang Tombs, Shaanxi 1991*, p 35.

Photograph by courtesy of Zhang Qunxi.

2-02: *Section of a mural in the tomb of Li Shou*. Photograph by courtesy of Zhang Qunxi.

### Chapter 3

3-01: *In the laboratory under the microscope: 'Horse and Groom' Acc. No. F1945.32, Freer Gallery of Art.*

3-02: *Detail of 'Horse and Groom'*

3-03: *The split bamboo tube with vermilion and malachite separated into three layers: the bottom layers are called 'first red' and 'first green'.*

3-04: *Cinnabar crystals on a matrix of barite.*

3-05: *'First red' and 'third red'.*

3-06: *Red earth specimens, as still sold by Chinese pharmacists.*

3-07: *Ground red earth, as still sold by Chinese pharmacists.*

3-08: *Malachite specimen from the Guangdong mine in Sichuan province.*

3-09: *Azurite and malachite combined in a layered mineral specimen.*

3-10: *Azurite crystals on a matrix with some malachite.*

3-11: *Realgar specimen from the Shimen mine, Hunan, China.*

3-12: *Guanyin of the Autumn Moon; Northern Song dynasty 968; Hanging scroll (mounted on panel); ink and colour on silk; 107.1x59.1 cm.; Acc. No. F 30.36, Freer Gallery of Art.*

3-13: *Ksitigarbha and attendants in a landscape; Song dynasty (960-1279CE); ink and colour on silk; 106.4x58.2 cm.; This painting on silk is said to have been found at Dunhuang; Acc. No. F 35.11, Freer Gallery of Art.*

3-14: *Orpiment and realgar combined in a specimen from the Shimen Realgar Mine, Hunan, China.*

3-15: *Taken from "The chemical arts of old China", Li Chiaoping, 1948, p. 93, figure 47.*

3-16: *Clam shell specimen as still sold by Chinese pharmacists.*

3-17: *Fossilised clam shell.*

3-18a+b: *Double clam shell with painting on both interior sides:*

a. *The Hunt, China, dated to the Late Zhou, Qin or early Han dynasty.*

b. *The Kill, dated to between the Eastern Zhou Dynasty (771-256BCE) and the Han Dynasty (206BCE-220CE); painted clam shell; 7.5 x 9 cm.*

3-19: *Blue aragonite specimen from Wenshan China.*

3-20: *Aragonite specimen from Guilin, Guansi province, China.*

3-21: *Mica for painting.*

3-22: *Mica specimen with fluorite, quartz and green mica from the Yaogangxian Mine in Hunan province, China.*

3-23: *Safflower as sold on the Xi'an marketplace.*

3-24: *Rouge prepared with glue, a traditional paint material sold in small boxes with a paper wrapping, printed with red characters.*

3-25: *Indigo of the first quality mixed with clear glue. This is prepared indigo, a traditional paint material sold in small boxes with a paper wrapping printed with red characters.*

3-26: *Indigo in the blue trees of the scroll 'Panorama of Hang Zhou on West Lake'; Acc. No. F1911. 209, Freer Gallery of Art.*

3-27: *Section of the scroll painting 'Mongols bringing a tribute of horses'; The design is attributed to Han Gan (ca. 715- after 781) and the painting is dated 1368-1644; colour and gold on silk; 192.8 x 31.0 cm.; Acc. No. F1915.16, Freer Gallery of Art.*

3-28: scroll painting 'A Tartar horseman and a rolling horse'; 14th-15th century; ink and colour on silk panel; 120.6 x 46.3 cm.; Acc. No. F1916.526, Freer Gallery of Art. The blue details of the saddle and blue clothing appear to be indigo.

3-29: Dihuang, specimen as still sold by Chinese pharmacists.

3-30: Huai flower: the unopened flower buds are used to make a light green dye.

3-31: Dong-Ah glue, specimen as still sold by Chinese pharmacists.

3-32: Fish glue, specimen from Xi'an China.

3-33: Stick lac specimen from Indonesia; courtesy of Kremer Pigmente, Germany.

#### Chapter 4

4-01: A sketch used for a painting after a traditional Tang painting.

4-02: A cross section of sample ZQX1.

4-03: Microscope photograph: with UV light we see the structure of a straw fibre in the ground layers of the wall in the Yongtai tomb; Magnification 200x.

4-04: Microscope photograph of a fibre of mumian, cotton; Magnification 200x.

4-05: The feathery structure is Gaoling and the round forms are chalk coccoliths in sample ZH3.

4-06: In the ground layer of sample YT5 we found fish glue.

4-07: UV photograph of cross section of sample YT5; Magnification 200x.

4-08: Cross section of sample YT5; Magnification 500x.

4-09: The location from which sample YD3 was taken.

4-10: Cross section of sample YD3, showing a remarkable small spot of lead in the chalk layer: no other traces of lead in any form are present in the samples of the three Tang tombs.

4-11: Layers of a huangtu, yellow earth mixed with mumian, cotton fibre in the ground layer of a cross section of sample YD3; Magnification 200x.

4-12: Under UV light the fibres are clearly visible in the layer of huangtu, yellow earth mixed with mumian, cotton fibre in this ground layer of the cross section of sample YD3; magnification 200x.

4-13: The troublesome sample ZH2, which vanished more than once during the preparation of a cross-section, due to its dissolving components; Magnification 200x.

4-14: Cross section of sample ZH2; Magnification 500x.

4-15: The location from which sample YD2 was taken.

4-16: Cross section of sample YD2; Magnification 200x.

4-17: UV photograph of the cross-section of sample YD2; Magnification 500x; measure strip of 100  $\mu\text{m}$ .

4-18: The cross-section of sample WM1; Magnification 500 x.

4-19: The location from which sample YT4 was taken.

#### Chapter 5

5-01: Cross section of sample ZQX1; Magnification 200x.

5-02: Cross section of sample ZQX1; Magnification 500x.

5-03: UV Photograph of cross-section of sample ZQX1; Magnification 500x.

5-04: SEM photograph of sample ZQX1.

5-05: SEM photograph of the groundlayer of sample YD4; see also figure 5-01 and 5-02.

5-06: SEM photograph of sample YT4: 1 is the ground layer; 2 is the paint layer; see also figure 5-03, 5-04, 5-05 and 5-06.

5-07: Surface of the sample YT2 with soot particles. On the left a mumian fibre is visible.