

# Gems & Jewellery

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## Gems and Minerals

# The delicate art

Pietra dura, the ancient art form also known as 'Florentine mosaic', is still produced by traditional methods in rural Northamptonshire.



*Koi carp plaque by Thomas Greenaway. Photo © Greenaway Mosaics LLP.*

Almost every traveller to Florence in the late nineteenth century returned with a souvenir in the form of a piece of furniture, jewellery or other small ornament decorated with a form of mosaic commonly termed 'Florentine mosaic'. It is often referred to as 'commesso' although strictly speaking this refers to pietra dura (literally 'hard stone') pieces that are assembled like a jigsaw puzzle, rather than intarsia which is pietra dura where pieces of stones are inserted into carefully shaped holes in the background material. This extraordinary art involves the creation of designs — animals, figures, fish, geometric patterns — in minute pieces of precisely-shaped coloured stone inlaid into a backing. The coloured stones include jasper, lapis lazuli, agate, chalcedony, rare

marble and (nowadays especially) malachite. The surround is most often black Belgian marble from a quarry south of Brussels, although pure black is now rare, and the backing material is slate. The technique can be traced back to Byzantine times and there are superb Renaissance examples, but from a jewellery point of view the heyday was in Victorian times, with a huge number of examples being produced, although not all with exemplary skill.

Among the handful of modern artists using this technique is Thomas Greenaway, of Greenaway Mosaics in Northamptonshire, whose inlaid plaque depicting a koi carp (pictured left and front cover) recently won the silver prize in the Lapidary section of 2010 Craftsmanship and Design Awards run by the Goldsmiths' Craft and Design Council. The materials and technique used in the late nineteenth century are well documented.\*

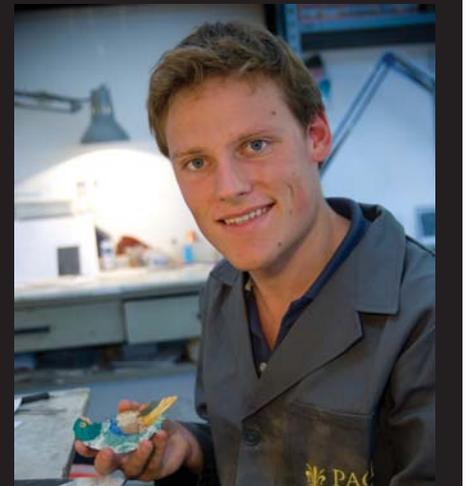


*A Victorian pietra dura brooch. Photo © Marcus McCallum.*

It is thus interesting to talk with Thomas and see how the modern approach compares with that of some 120 years ago.

Thomas notes that many of the old techniques are still used by traditional mosaicists like himself. However stones are

Thomas Greenaway was initially trained in woodworking at the Chippendale School of Furniture, Design and Restoration in Scotland. On a visit to Italy he discovered the Opificio in Florence and was intrigued by the pietra dura work he saw there, and its relationship to the marquetry work that he had found so interesting in furniture. Studying at the Opificio was not possible, but one craftsman whom he refers to as 'an old maestro' took him in as an apprentice. He later moved on to another workshop, spending in all three and a half years in Italy before returning to Britain to establish his own workshop. You can see more of his work at [www.greenawaymosaics.com](http://www.greenawaymosaics.com)



now cut into slices with circular, diamond-impregnated wheels, rather than the 'thin blades of iron or copper' used with emery as an abrasive. With the circular saw cooling is required, and Thomas uses water with the softer stones and oil for the harder ones. For cutting the thin slices – traditionally about 2.5–3 mm thick – into the intricate shapes, Thomas still uses a traditional chestnut bow saw ('archetto') with iron wire, although he also employs a rotary blade with water for larger pieces – much quicker than the archetto. Today moistened carborundum powder (silicon carbide, first introduced in 1891) has replaced the emery used in the past for sawing and levelling the backs of the pieces. The variously shaped openings in the surrounding black marble are still begun with holes through which the iron wire blade can be threaded, but today electric power drills have generally replaced the older hand operated drills.

The backings, now as then, are slate, although these are ground flat with a lapping machine nowadays rather than with the older iron plates with wooden handles. Similarly the filing of the shapes to ensure a precise fit is now carried out with diamond needle files. The final polish is still a critical process and the finest emery powder is used. The traditional adhesive was pece greca, a mixture of beeswax and mastic, with heat being used to bind the parts and care taken to use no more cement than was necessary. With use of this mixture of beeswax and mastic resin later exposure to heat can displace the inlays, and so some workers now use more modern adhesives.

Thomas notes that the greatest change since the late nineteenth century has probably been in the cost of labour and materials. He says: "Sadly many Florentine mosaicists are going out of business and I now know of only about 17 small firms still in production, many of whom are struggling with less than five employees. Rather than 1000 involved in the trade in its heyday, I expect there are now about 50, and there is a great absence of youth." He also notes that nowadays all the processes, from design to finishing, are usually done by one person rather than by a number of specialists,



**Pietra dura production.** (a) A chestnut bow saw is used for cutting. (b) Paper templates are stuck down to a selected area of the stone. (c) Cutting around the template at a 30° angle. (d) Gluing the pieces together. (e) Drilling holes to thread the iron wire through. (f) Sawing the Belgian black marble. (g) Filing the aperture to fit the pieces in to. (h) Fitting the pieces without any gap. Photos © Greenaway Mosaics LLP.

although the market still relies on the commissions of the very wealthy.

Via degli Alfani 78, the home of the Opificio delle Pietre Dure, had its origins in the Court workshop set up by the Medicis in 1588. Today the Opificio houses an

interesting pietra dura museum and has other departments carrying out restoration work in many different materials.

**Jack Ogden**

\* 'How Florentine Mosaics are made.' *Pall Mall Gazette*, September 1889.