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Cosimo Tura as Painter and Draughtsman: The Cleaning and Examination of his *Saint Jerome*

JILL DUNKERTON

As court painter first to Borso and then to Ercole d'Este, Dukes of Ferrara, Cosimo Tura was called upon to produce not only paintings, but also designs for the luxurious trappings – from tapestries and

wedding dresses to tournament harnesses and silver table services – of one of the most extravagant courts of fifteenth-century Europe.¹ He must have supplied the makers of these artefacts with countless sketches and drawings, yet only three drawings on paper generally accepted as by Tura have been identified.² To extend our knowledge of Tura's style and technique as a draughtsman it is necessary to turn to his paintings. Infra-red methods of examination have shown that a bold and detailed underdrawing is an invariable feature of the paintings by him examined to date.³ In many of them an increase in transparency of the paint layers with age has made much of the underdrawing visible to the naked eye. In the case of the *Saint Jerome* in the National Gallery (Fig. 1 and Plate 2) an unusually detailed underdrawing has long been evident in some areas, but it needed a full photographic and scientific examination, made as a standard part of the process of cleaning and restoration, to reveal that the underdrawing is as remarkable for its technique as for its extent.

The panel was bought by the National Gallery in 1867 from the widow of Sir Charles Eastlake as one of the group of paintings from Eastlake's own collection acquired while he was Director.⁴ Like many of the Ferrarese paintings in the National Gallery, the *Saint Jerome* came from the Costabili Collection in Ferrara, where Eastlake and his travelling agent, Otto Müндler, first noted it in 1858. Neither mentions its specific condition but Müндler comments on the generally neglected state of the collection,⁵ and, when in 1860 Eastlake bought the panel as part of a package insisted upon by the Conte Costabili before he would part with *The Virgin and Child with Saints George and Anthony Abbot* by Pisanello (NG 776), it was immediately sent, with the Pisanello and the other painting, another *Saint Jerome* by Bono da Ferrara (NG 771), to Giuseppe Molteni, the leading Milanese restorer. Molteni, who restored many of Eastlake's Italian purchases, both for his private collection and for the National Gallery, welcomed the work because, as he told his friend Giovanni Morelli in a letter, 'it will procure me the knowledge of three new painters whom I have never seen before'.⁶

Although the National Gallery manuscript catalogue records a cleaning and varnishing of Tura's *Saint Jerome* in 1881, this can only have comprised a



Fig. 1 Cosimo Tura, *Saint Jerome* (NG 773), c. 1470. Poplar, 101.2 × 57.4 cm. Before treatment, with cleaning tests.

surface cleaning, or at the most the removal of an artificial toning:⁷ the appearance of the painting before the recent treatment had every characteristic of a restoration executed by Molteni. With time, his varnishes, whether deliberately tinted or not, tend to discolour to a greenish-brown, almost olive, hue, while his retouchings often blanch to a silvery-grey colour (Plate 1) and in the glazes lose the transparency which they presumably originally possessed. They can also be transparent to infra-red, so infra-red methods of examination, when used in conjunction with other diagnostic techniques such as X-radiography, sometimes supply useful information on the condition of the underlying original paint. For example, on the *Saint Jerome* infra-red photograph (Fig. 2) penetrated the retouchings sufficiently to show that while some parts of the painting, such as the head of the saint, were almost perfectly preserved, other areas, particularly in the lower part of the picture, had suffered from abrasion and extensive fine flaking. Along the lower edge the paint and ground had flaked away completely, the vermilion of the retouchings on the cardinal's hat having blackened while that of the original paint had retained its colour. In addition, long diagonal bands of damage were visible in both the infra-red and X-ray photographs (Fig. 3) where the surface seems to have been splashed with a corrosive substance, perhaps candle wax or a cleaning material, or possibly bird or bat droppings which can eat into a paint film if not immediately removed.

Molteni, however, did more than just touch out these losses. As in so many of his restorations for the National Gallery, and for other owners and institutions, he made several adjustments and 'corrections' to the painting.⁸ Some were quite subtle: for example, the general softening and rounding of Tura's characteristically angular modelling of the drapery folds and the suppression of the fine highlights along the outer edges of the folds on the side of the figure in shadow – a form of secondary backlighting again typical of the painter. Other changes were even less justifiable. For no apparent reason the columnar folds of drapery which hang down from the saint's left elbow were revised, while his raised arm was slightly widened, presumably because it was considered unacceptably lean and sinewy (Plate 1). This enlargement of the outline continued down the folds of the habit draped across his upper arm and shoulder, filling in the space between them and his beard and throat. This space, in itself a pleasing configuration of overlapping forms, is important in that it emphasises the three-dimensional qualities of the figure. Further down, the saint's sharp bony knee was shortened and made more rounded, while in restoring the damaged lower edge Molteni eliminated the plant in the foreground altogether.

In the landscape the rocky outcrops on the left were

glazed to reduce the strange, but perhaps significant, geological difference between the pale grey stone to the left of the tree and the deep purple-red of the cliffs to its right, and the distant mountains were reinforced, spoiling Tura's intended effect of aerial perspective. In the sky the arc of light was painted out, although it remained just visible, allowing Martin Davies to establish correctly the original position of the fragment cut from the panel showing *Christ Crucified*, now in the Brera, Milan (Figs. 4 and 5).⁹

That little was lost in the sawing of the panel is confirmed by the presence of a small green bush at the bottom edge of the Milan fragment. This originally



Fig. 2 Tura, *Saint Jerome*. Infra-red photograph, before cleaning.



Plate 1 Tura, *Saint Jerome*. Detail before cleaning, with a cleaning test.

topped the pinnacle of rock in the *Saint Jerome* where similar bushes are now visible but had been touched out by Molteni. It has sometimes been suggested that the composition of the *Saint Jerome* panel was also reduced at the left and possibly the right edges.¹⁰ The wood of the panel has indeed been trimmed, but there is a definite raised lip or ‘barbe’ of gesso down the right edge and a slightly elevated edge to the gesso along the left edge, suggesting that a similar ‘barbe’ was present and that the panel may once have had a frame mould-

ing attached to the front edges. In addition, the fact that the panel consists of a single board of close to the largest width commonly found in planks of poplar, suggests that the work always had this tall narrow format. If it had been any wider, joins in the panel would have been required.

A clue to the possible date of the removal of the Milan fragment was discovered during the cleaning of *Saint Jerome*. Molteni’s varnish and retouchings were both readily dissolved, as is usually the case with his



Plate 2 Tura, *Saint Jerome*.
After cleaning and restoration.



Fig. 3 Tura, *Saint Jerome*. Composite X-radiograph.

restorations, in the same solvent (in this instance acetone). Underneath were the remains of a thin and streaky application of an older varnish layer. This varnish, which was of an unusually hot, red-brown colour, was evidently not original since it covered many of the losses, and runs and dribbles could be seen down the trimmed right edge of the panel. Analysis of a sample by GC-MS showed it to be based on an African copal, probably a Congo copal, in linseed oil, and possibly pigmented with aloes or a similar dyestuff. It is unlikely to date from before the early nineteenth century.¹¹ Since brushmarked streaks of the same varnish are clearly visible on the *Christ Crucified* (not cleaned at the time of writing) it was evidently still attached to the *Saint Jerome* when this varnish was applied. Therefore, it seems probable that the painting was mutilated at some point between about 1783, when it was seen – and described as ‘an elongated panel’ – in the Rizzoni Collection, Ferrara,¹² and 1836, by which date the *Saint Jerome* was in the Costabili Collection. The Milan fragment has suffered the same forms of damage, including the splashes of corrosive liquid, as the National Gallery painting, but, as it passed through different collections in the mid- and later nineteenth century,¹³ it seems to have escaped the attentions of Molteni.

The condition of the *Saint Jerome* following the removal of the old varnishes and restoration (Fig. 6) was highly informative in assessing Tura’s technique. Because much of the damage consists of flaking and abrasion to the upper paint layers rather than total loss, in many areas the broad hatched lines of black underdrawing were exposed. More unexpected was the discovery of fine lines of lead white paint used to highlight the underdrawing (Plate 3). For these lines to register, Tura could not have been working on a pure white gesso ground. The areas of gesso exposed by damage have a warm golden colour but often this is attributable to the discoloration with age of the glue in the gesso, especially if a high proportion of glue is present. While samples indicate that the ground is indeed rich in glue, several cross-sections also include a layer of yellow-brown paint, consisting of a mixture of carbon black and yellow ochre with possibly also a little yellow lake, applied over the ground, and, in one sample, over the lines of black underdrawing (Plate 4). Confirmation that this layer is not an overall *imprimatura* employed to reduce the whiteness of the ground is provided by its absence from samples taken from the flat areas of pale green grass (mainly malachite with varying amounts of lead white and lead-tin yellow) and from the sky (which has a layer structure of ultramarine and white over an underpaint of azurite and white, a feature common to many paintings of this period).¹⁴

The distribution and function of this yellow-brown

layer only become apparent in the computer-assembled infra-red reflectograms. These were recorded after the restoration, since unretouched areas of loss tend to register as white, causing difficulties in imaging (Fig. 7).¹⁵ As well as revealing even more underdrawing of the conventional linear and hatched type, and with greater clarity than in infra-red photographs, the reflectograms show that Tura reinforced the already sculptural properties of his drawing by the use of broad washes of monochrome undermodelling. Since it is the black component of the pigment mixture used for the undermodelling that registers in infra-red, the image formed by the washes is best separated from that resulting from the overlying paint layers in those areas with little or no black pigment, that is, in the flesh tones of the main figure and, more particularly, in the robe of the donor figure on the right, which is painted with red lake and therefore virtually transparent to infra-red radiation (Plate 3 and Fig. 8).

This use of monochrome undermodelling to define the volume and lighting of figures is more commonly associated with the paintings of Leonardo da Vinci, and subsequently with sixteenth-century painting. A brown underlayer can be seen in areas of flesh painting in the later, oil-based paintings of Piero della Francesca, but the modelling, if there is any,¹⁶ does not seem nearly as well developed as that of Tura in the *Saint Jerome*. While the use of wash drawing is not uncommon in works on paper by the mid-fifteenth century, it is possible that its appearance here on a panel is in some way connected with the influence on Tura's painting method of artists from Northern Europe. It is probably not a coincidence that brown or grey-brown layers applied over the ground and underdrawing are reported on paintings associated with the workshops of Rogier van der Weyden and, before him, of Robert Campin, including *The Virgin and Child before a Firescreen* discussed in this *Bulletin* (see pp. 21–35).

What does seem peculiar to Tura is the use in an underdrawing of highlights of lead white, applied mainly to the edges of forms, but sometimes also in small areas of hatching to indicate broader areas of light, for example in the hollowed-out folds across the saint's knee and thigh. Similar hatched strokes of white highlighting have been noted on his *Allegorical Figure* (NG 3070) and can be seen in X-radiographs, or sometimes on the damaged surface, of certain other works.¹⁷ Inevitably, in X-radiographs the lines of white underdrawing can be difficult to distinguish from lead-white based highlights in the paint layers above, but a pentimento in the *Saint Jerome* gives a good indication of the extent of the highlighting. Originally the barn owl with the frog was placed to the left of its present position: it is now superimposed over the completed painting of the bark of the tree. In

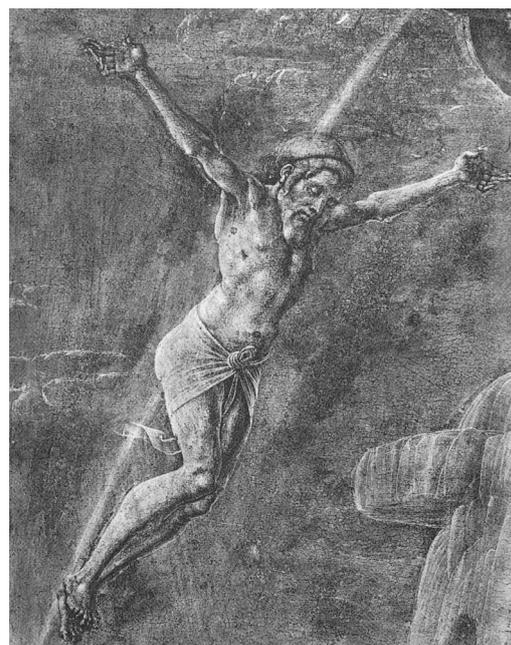


Fig. 4 Tura, *Christ Crucified*, c. 1470. Poplar, 21.5 × 17 cm. Milan, Brera.

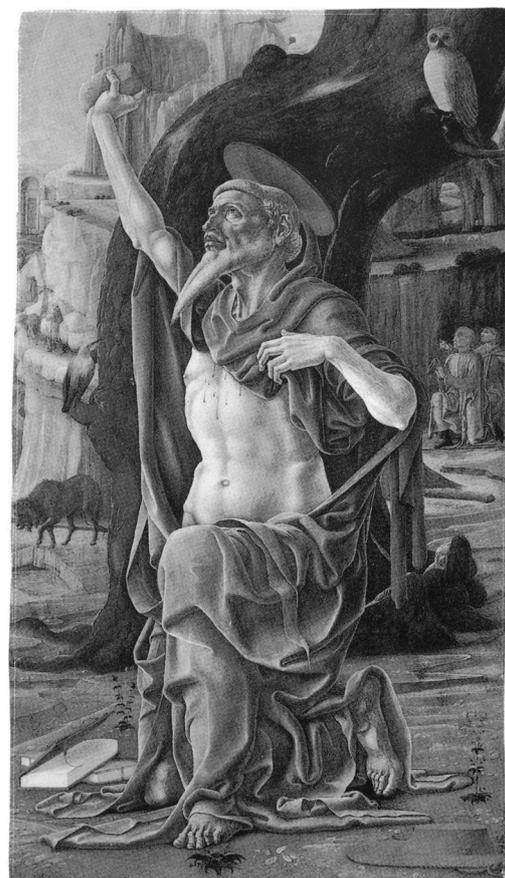


Fig. 5 Photomontage showing *Christ Crucified* with *Saint Jerome*.



Fig. 6 Tura, *Saint Jerome*. After cleaning, before restoration.

infra-red light the black underdrawing of the owl in its first position can barely be detected because of the amount of black pigment in the overlying paint, but in the X-radiograph (Fig. 9) the underdrawn owl is readily visible, entirely because of Tura's use of white highlights.

To get some idea of the appearance of the *Saint Jerome* before the application of the paint layers, one can turn to the damaged and retouched, yet still astonishingly vigorous, pen and brush drawing on ochre-tinted paper of *Hercules and the Nemean Lion* in Rotterdam (Fig. 10).¹⁸ In this drawing there are the same bold black outlines and strokes of parallel hatching which follow round the forms like the drawings of a sculptor, the broader washes – and some shading with black chalk – to further emphasise volume and to establish shadow, and then finally the linear and hatched highlights of white.

It has been suggested recently¹⁹ that this drawing is close in date to the organ shutters with the *Annunciation* and *Saint George and the Dragon* painted by Tura in 1469 for the cathedral of Ferrara. Following the cleaning of the *Saint Jerome*, there are reasons to believe that it too may date from this period and therefore be earlier than previously thought.²⁰ The landscapes in the *Saint Jerome* and the *Annunciation*, with their zig-zagging vertical construction and pale green grass, have much in common. The draperies of the saint and the pose with one knee raised – unusual among Jeromes of the fifteenth century – can be related to those of the Virgin and the Angel, while the musculature of his undraped torso can be compared with the representations of relief sculptures on the side walls in the *Annunciation*. The technique of the flesh painting, where lighter areas are underpainted with a pale warm grey and then scumbled with the thinnest of applications of colour – in the case of *Saint Jerome*, lead white tinted with red lake – appears to be the same.²¹ A similar layer structure occurs in the flesh tones of the *Allegorical Figure*, possibly Tura's earliest surviving work, but not, for example, in *The Virgin and Child Enthroned* (NG 772) from the Roverella Altarpiece and *The Virgin Annunciate* (NG 905), both thought to date from the mid-1470s or later.

Although the technique and damaged condition of the organ shutters means that their colour is now generally muted, they share with the *Saint Jerome* a particular use of local touches of the bright red pigment vermilion. On the shutters it is applied to certain details, mainly, it would seem, for decorative purposes, for example in the harness of Saint George's horse; but on the *Saint Jerome* the vermilion, which is by far the brightest colour in the painting, is used to draw the eye of the viewer into the painting, from the cardinal's hat and the books in the foreground to the



Fig. 7 Tura, *Saint Jerome*. Composite infra-red reflectogram (assembled by computer).



Plate 3 Tura, *Saint Jerome*. Detail after cleaning, before restoration.



Fig. 8 Tura, *Saint Jerome*. Infra-red reflectogram detail from Fig. 7.

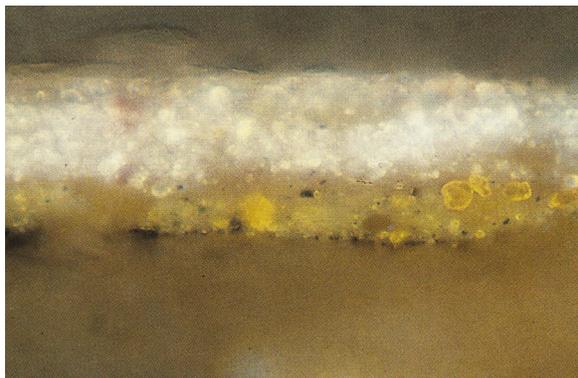


Plate 4 Cross-section from Saint Jerome's right knee showing a thin line of underdrawing on the glue-rich gesso. Over the underdrawing is the yellow-brown undermodelling, followed by two layers of flesh paint. Photographed under the microscope in reflected light at 750 \times magnification; actual magnification on the printed page 550 \times .

small but not-to-be-overlooked figure of the donor in the background. The importance of the donor is further emphasised by the fact that when the fragment showing *Christ Crucified* is in place (Fig. 5) it becomes evident that the donor and the cowed figure presenting him are looking up at the vision of the Crucifix, while the saint seems almost more absorbed in penitential devotion.

In the first known description of the painting, that of 1783, the donor is identified as Borso d'Este.²² While this association of Borso with the painting has sometimes been repeated,²³ the figure of the donor bears no resemblance to portraits of him, least of all in its sobriety (by Borso's standards) of dress. Unfortunately the face is badly damaged. In restoring the painting, the areas of complete loss were toned in,

but no attempt was made to reconstruct the features for fear of prejudicing any future identification of the portrait. Nevertheless it is worth pointing out that even in its damaged condition the head – short-haired and apparently balding, with a long, hollow-cheeked face and distinctive bumpy nose – resembles that of the similarly costumed figure standing to the left of Borso in the lower section of the fresco of the Month of April in the Palazzo Schifanoia.²⁴

The donor is presented by a monk – perhaps also a portrait – who wears the habit possibly of a Franciscan, or more probably of one of the Hieronymite congregations.²⁵ Saint Jerome himself wears the outer mantle of a habit (the front panel of which is thrown back over his left arm) rather than the customary tunic or hair shirt. Similarly robed friars, but more like conventional Franciscans, carry building materials up the paths to the magnificent Albertian church on the left. This may refer to Jerome's title as one of the Fathers of Church rather than to any actual church under construction at the time. The church façade is carefully underdrawn whereas the figures are later additions, thinly painted over the completed landscape. Also added are the bird on the left, an accurate depiction of a wall-creeper, inhabitant of wild and rocky places, and the frog – now discoloured but once a rich 'copper resinat' green – which does not feature in the first, white-highlighted drawing of the owl (Fig. 9).²⁶

In a painting so rich in detail and allusion much remains to be explained, not least the replacement of the saint's traditional rocky cave with the hollowed out, almost petrified tree. The boldness of this invention is now diminished by the panel having been cut, but the design makes it improbable that the work was ever part of a larger complex of panels. Therefore to questions about its patron, date and provenance should be added those concerning its original function, whether it was ever intended for a church²⁷ or whether it was for private devotion. While much remains unanswered one can only conclude, like Cesare Cittadella in 1783, that Tura's work is as 'bizarra, ed erudita' as it is 'diligentissima' in execution.²⁸

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Fig. 9 Tura, *Saint Jerome*. Detail of the X-radiograph.



Fig. 10 Tura, *Hercules and the Nemean Lion*, c. 1470. Black chalk, pen and black (now brown) ink, ink washes, white brush highlights on ochre-prepared paper, 21.2 × 15 cm (irregular shape). Rotterdam, Museum Boymans-van Beuningen.

Notes and references

1. For the most recent account of Borso's court see Alessandra Mottola Molino and Mauro Natale, eds., *Le Muse e il Principe. Arte di corte nel Rinascimento padano*, exhibition catalogue, Museo Poldi-Pezzoli, Milan 1991; and for a summary of documents relating to Tura's work for the court see Eberhard Ruhmer, *Cosimo Tura*, London 1958, pp. 79–84.
2. See note 18.
3. Of the paintings by Tura in the National Gallery, infra-red images of the *Allegorical Figure* (NG 3070) and *The Virgin and Child Enthroned* (NG 772) are reproduced in Jill Dunkerton, Ashok Roy and Alistair Smith, 'The Unmasking of Tura's "Allegorical Figure": A Painting and its Concealed Image', *National Gallery Technical Bulletin*, 11, 1987, pp. 5–35 (see also for further references to the *Allegorical Figure* in the text of this article). A lecture given in 1992 by Jill Dunkerton on *The Virgin Annunciate* (NG 905) at the Opificio delle Pietre Dure, Florence, is to be published, with infra-red photographs, in a future issue of *OPD Restauro*. Other published examples include the Ferrara organ shutters (see Jadranka Bentini, ed., *San Giorgio e la Principessa di Cosmè Tura: Dipinti restaurati per l'officina ferrarese*, Bologna 1985, p. 19), the Fitzwilliam *Crucifixion* (see David Scrase, 'Cosimo Tura "The Crucifixion with the Virgin and St John"', *The Bulletin of the Hamilton Kerr Institute*, 1, 1988, pp. 69–71); and the *Pietà* in the Museo Correr, Venice (see Attilia Dorigato, ed., *Carpaccio, Bellini, Tura, Antonello e altri restauri quattrocenteschi della Pinacoteca del Museo Correr*, Milan 1993, p. 151). Unpublished examples include *The Annunciation with Saints Francis and Aurelius* in the National Gallery of Art, Washington (photographs kindly sent by David Alan Brown).
4. David Robertson, *Sir Charles Eastlake and the Victorian Art World*, Princeton 1978, p. 236 and p. 276.
5. Eastlake Notebook, 1858, Vol. 1, f. 22v (National Gallery Archive) and Carol Togneri Dowd, ed., 'The Travel Diary of Otto Mündler', *The Walpole Society*, LI, 1985, pp. 214–16.
6. Letter from Giuseppe Molteni to Giovanni Morelli, 3 December 1860. See Jaynie Anderson, 'Layard and Morelli' in F.M. Hales and B.J. Hickey, eds., *Austen Henry Layard tra l'oriente e Venezia*, Venice 1987 (Conference proceedings), pp. 114 and 129, note 31.
7. For a 'toning preparation' applied by Molteni see Jill Dunkerton, 'The Technique and Restoration of Bramantino's "Adoration of the Kings"', *National Gallery Technical Bulletin*, 14, 1993, pp. 43–4; and also Dunkerton, Smith and Roy, op. cit., pp. 13 and 33, note 11.
8. Molteni was criticised even by members of his immediate circle for his tendency to repaint and 'correct' pictures, sometimes, it would seem, with the approval of Eastlake. See Jaynie Anderson, 'Introduction to the Travel Diary of Otto Mündler', *The Walpole Society*, op. cit., pp. 22–4.
9. Martin Davies, *The Earlier Italian Schools*, National Gallery Catalogues, London 1961, reprinted 1986, p. 517.
10. For example by Ruhmer, op. cit., p. 42, who proposes that sections are missing at the top and on the right and that originally the panel was one and a half times as high and twice as wide; and Stefania Macioce in 'Il San Girolamo di Cosmè Tura e le dispute ereticali del secondo Quattrocento', *Musei Ferraresi: Bollettino Annuale*, 15, 1985–7, p. 35, note 3, who suggests that it may have lost about 17 cm from the left edge.
11. John Mills and Raymond White, *The Organic Chemistry of Museum Objects*, London 1993 (revised edition), pp. 103–5.
12. It is described as a 'tavola per lungo' in Cesare Cittadella, *Catalogo Istorico de' Pittori Ferraresi*, Ferrara 1782–3, Appendix to Vols. III and IV, p. 308.
13. The *Christ Crucified* has yet to be dealt with in the re-cataloguing of the Brera collections, but for its nineteenth-century provenance, including a label on the reverse linking it with the *Saint Jerome*, see Rosemarie Molajoli, *L'opera completa di Cosmè Tura e i grandi pittori ferraresi del suo tempo: Francesco Cossa e Ercole de' Roberti*, Milan 1974, p. 87. I am very grateful to Pietro Marani of the Pinacoteca di Brera for enabling us to examine the fragment out of its frame.
The missing section, consisting of the twisting trunk of the tree, was probably destroyed, but it is not impossible that it included another of the birds and animals which appear in representations of Saint Jerome (see Herbert Friedmann, *A Bestiary for Saint Jerome. Animal Symbolism in European Religious Art*, Washington 1980) and was therefore preserved as a separate fragment. There is no reason to believe that the panel was any taller than its height with the Brera fragment in place.
14. The medium of these light-coloured areas was identified as egg tempera, possibly with a small amount of added oil, while the red of the cardinal's hat and the black of the tree-trunk were found to be walnut oil. Although this painting mostly lacks the rich resin-containing glazes of Tura's other works in the National Gallery, these results are generally consistent with those so far obtained from his paintings. See Raymond White and Jennifer Pilc, 'Analyses of Paint Media', *National Gallery Technical Bulletin*, 14, 1993, pp. 86 and 91–2.
15. For the method of assembly see Rachel Billinge, John Cupitt, Nicolaos Dessipris and David Saunders, 'A Note on an Improved Procedure for the Rapid Assembly of Infrared Reflectogram Mosaics', *Studies in Conservation*, 38, 1993, pp. 92–8.
16. See Jill Dunkerton, Susan Foister, Dillian Gordon and Nicholas Penny, *Giotto to Dürer: Early Renaissance Painting in the National Gallery*, New Haven and London 1991, p. 198. The recent examination of the *Saint Michael* (NG 769) by infra-red reflectography does not reveal any tonal variation in the brown underlayer, but Piero's flesh tones are more opaque to infra-red than those used by Tura and cross-sections show that the underlayer is based on ochre with little or no black pigment to register in infra-red.
17. Lines of parallel hatching with X-ray opaque paint which do not seem to be associated with the upper paint layers appear in X-radiographs of *The Dead Christ Supported by Two Angels* in the Kunsthistorisches Museum, Vienna. A good example of a painting where the white highlighting has been exposed by small losses

- is *The Flight into Egypt* (New York, Metropolitan Museum).
18. For a colour plate and a detailed description of this drawing, including its condition (which should possibly be reassessed in the light of discoveries about the underdrawing on the *Saint Jerome*), see the catalogue entry by Andrea Bacchi in Mottola Molfino and Natale, op. cit. (note 1), pp. 154–6. The same drawing techniques occur in the more highly finished study of *Saint John the Evangelist* in the Uffizi, Florence. The technique of the pen drawing of *The Virgin and Child with Saints* in the British Museum can be compared with that of the underdrawing in the Fitzwilliam *Crucifixion*. See Scrase, op. cit. (note 3).
 19. Bacchi in Mottola Molfino and Natale, op. cit., pp. 154–6.
 20. 1474 is the date often given, for no real reason, to the *Saint Jerome*. It has also been dated later. See, for example, Ruhmer, op. cit., p. 42.
 21. In both works their condition and the changes in transparency of the paint with age mean that this technique produces stronger contrasts than originally intended between highlights and shadows in the flesh painting. On *Saint Jerome* this is particularly noticeable on his right foot.
 22. Cittadella, op. cit. (note 12), p. 308.
 23. Most recently by Macioce, op. cit. (note 10), p. 29.
 24. The head is reproduced as a detail in Ranieri Varese, ed., *Atlante di Schifanoia*, Modena 1989, p. 460; and is identified by Andrea Bacchi (without citing a source) in *Francesco del Cossa*, Soncino 1991, p. 68, as Teofilo Calcagnini, the Duke's favourite. However, in both the mural and Tura's painting the figure seems far too old to represent Calcagnini, born in 1441, and, like Borso, an active man, fond of hunting, tournaments and other festivities. See *Dizionario Biografico degli Italiani*, XVI, Rome 1973, pp. 503–5.
 25. The colour of the habits in the painting is the same as that commonly used to represent Franciscans, but the Franciscan knotted cord is not in evidence and it does not seem to have been usual in the fifteenth century for a Franciscan friar to wear an outer mantle with a hanging front panel over the robe. The dress of certain Hieronymite congregations is close to that of the Franciscans (from whom some of the orders developed), being made from undyed wool and therefore represented with the same brown or grey-brown colours in paintings. See Eugene F. Rice, Jr, *Saint Jerome in the Renaissance*, Baltimore and London 1985, especially pp. 68–83. In the altarpiece *Saint Jerome in Penitence, with Saints and Donors* (NG 227) painted by Francesco Botticini for the church of the Hermits of Saint Jerome at Fiesole, Saint Eusebius is shown in a habit very like those in Tura's *Saint Jerome*. Although in the fifteenth century the Hermits of Saint Jerome of Fiesole had as many as forty houses in Italy (see *The Catholic Encyclopedia*, New York 1910, VII, p. 345), the most active and influential Hieronymite congregation in Ferrara seems to have been the Gesuati who had an oratory dedicated to Saint Jerome. However, their habit consists of a brown mantle worn over a white soutane. See Fabio Bisogni, 'Contributo per un Problema Ferrarese', *Paragone*, XXIII, 1972, pp. 69–79 and especially Plate 54.
 26. For discussions of the iconographical significance of the owl and wallcreeper see Friedmann, op. cit. (note 13), pp. 176–185, and Macioce, op. cit. (note 10).
 27. There is a tradition – apparently first recorded in a note added by Giuseppe Petrucci to Girolamo Baruffaldi, *Vita di Cosimo Tura*, Ferrara 1836, p. 37, but often repeated in the Tura literature – that the painting came from the Certosa in Ferrara. It may well have been in the Certosa for a time, without having been painted for it, since in the early seventeenth century many paintings from Ferrarese churches were apparently hidden there to prevent their dispersal following the collapse of d'Este rule in 1598. See Jaynie Anderson, 'The re-discovery of Ferrarese renaissance painting in the Risorgimento', *The Burlington Magazine*, CXXXV, 1993, pp. 543–4.
 28. Cittadella, op. cit. (note 12), p. 308.