

賞月池頭
好緩人結
社過水禽
眠不得飛



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The *Thirty-Six Views of Mt. Fuji* is so pivotal to Hokusai's career and subsequent global fame that we tend to take it for granted, forgetting how little we know about its particular genesis. I have written elsewhere of my conviction that it was above all a yearning for immortality that drove Hokusai at the age of seventy to the specific depiction of Mt. Fuji, a mountain that both in older Japanese legend and in local Edo mythology had powerful associations with rebirth and longevity.¹ I continue to feel that the *Thirty-Six Views* was above all a personal spiritual quest, the result more of one man's life cycle than of any developments in woodblock print technology.

At the same time, such technical changes were of great importance. One innovation now routinely cited in discussions of the *Thirty-Six Views* is the popularity of the imported pigment Berlin blue, particularly in the 'aizuri' mode using only blue in several shades. It has long been known that ten of the prints in the *Thirty-Six Views* were issued in *aizuri* (or 'semi-aizuri', with the sparing addition of other light colours), most likely as the very first in the series. Here I wish to look more closely at the *aizuri* fad itself by re-examining the key documentary evidence, and to propose a broader framework for understanding the introduction of Berlin blue into Japanese prints, and the particular appeal of this new colour for Hokusai. I hope to show that this blue colour was more than just a novel pigment: in its expressive power, Berlin blue worked both to enhance Hokusai's intentions in designing the *Thirty-Six Views* and to articulate the changing worldview of nineteenth-century Edo popular culture.

The 'Blue Revolution'

The 'blue revolution' in ukiyo-e will be evident to anyone who attempts to trace a steady chronological sampling of surviving Edo *nishiki-e* over the hundred-year history of the medium from 1765 to 1868. During the Bunsei period of 1818–30, blues seem to become steadily more varied and prominent, and then suddenly a strong bright blue emerged as the dominant colour of the Japanese print in about 1830, and came into full flower in the succeeding Tenpō era (1830–44). This 'blue revolution' was most conspicuous in landscapes; indeed, I would argue, it was critical to the great burst of landscape energy of the early 1830s, with Hokusai's *Thirty-Six Views* as the crucial catalyst. But the same shift occurred in all other genres of ukiyo-e as well, often well in advance of landscape.

It is now common knowledge among those who study Edo prints that the key factor in this 'blue revolution' was the imported pigment known as 'bero', or Berlin blue (in English, often 'Prussian blue'). This common sense, which is constantly re-circulated in books and catalogues of ukiyo-e, may be traced back to one crucial piece of documentary evidence, a passage from a miscellany entitled *Masaki no kazura*, by an Edo book dealer whom we know only by his trade name of Seisōdō and *haikai* name of Tōho. The passage was first introduced in 1918 by Asakura Musei, and is now routinely cited in any discussion of the introduction of Berlin blue into ukiyo-e.² As we shall see, it is a persuasive piece of evidence, filled with particular detail. Given the general paucity of documentary materials for the history of ukiyo-e, evidence like this commands interest and respect.

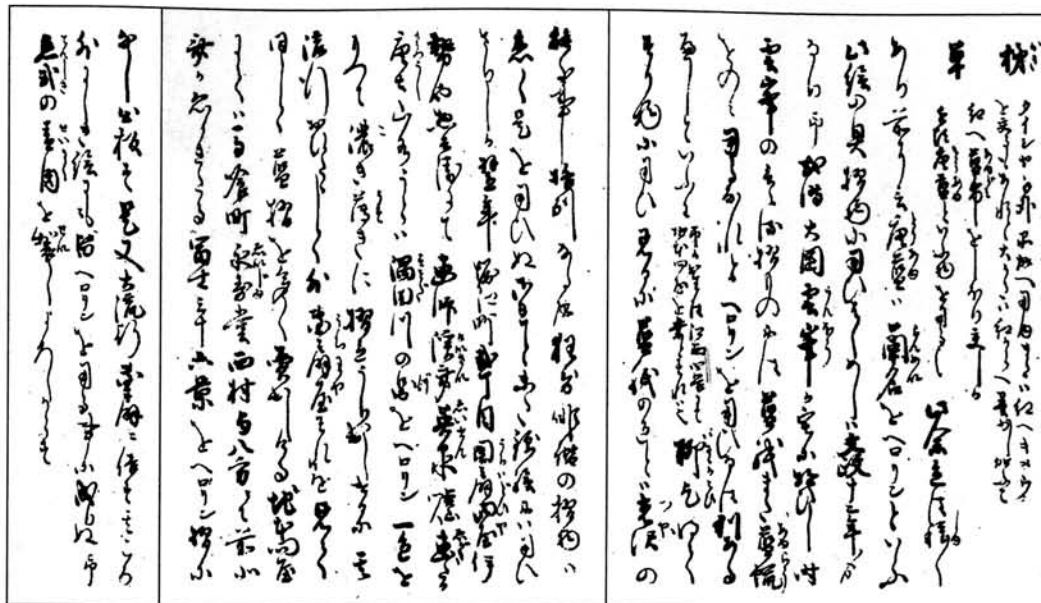
Detail, Fig. 2. Keisai Eisen. *Morokoshi sansui* (*Landscape of China*), 1829. *Aizuri* fan print in Berlin blue; 24.1 x 30.2 cm. Courtesy of the Brooklyn Museum of Art, Gift of Frederic B. Pratt (42.91). Photo: Justin Van Soest.

Before taking a close look at the passage from *Masaki no kazura*, however, we must recall that before it was introduced in 1918, no one gave much thought at all to the dramatic appearance of bright blues in Tenpō-era prints. Western collectors were highly sensitive to the qualities of this blue, which they came to know as 'Hiroshige blue', but they assumed it to be something uniquely, even mysteriously, Japanese. When Edward Strange, a pioneer British scholar of Hiroshige, gave a talk to the Japan Society of London in the spring of 1910, for example, a member of the audience queried him about the colours in Hiroshige's prints, in particular the 'indigo' that was 'quite different from that used by our own painters, and a colour possessing much beauty'. Strange, who was as ignorant as his questioner of the fact that Hiroshige's 'indigo' was actually of European chemical manufacture, proceeded to describe 'the old Japanese tradition' by which natural indigo was extracted from old blue rags, yielding 'the extraordinary quality it possessed'.³ Strange's opinion was followed without qualification by Kojima Usui four years later in the first serious Japanese-language study of Hiroshige.⁴

If Strange or Kojima had bothered to question any printer or publisher of traditional *nishiki-e*, of whom many were still around in late Meiji, they would immediately have learned that 'Hiroshige blue' was none other than *bero*, Berlin blue – not native indigo. But scholars of *ukiyo-e*, Western and Japanese alike, were in the habit of blaming much of the 'decadence' of late Edo *nishiki-e* on inferior and gaudy imported colorants, and were hence unwilling or unable to countenance any such possibility. More generally, scholars of *ukiyo-e* have devoted only marginal attention to the technical and economic foundations of printmaking, a neglect that remains unchanged today.

Once Musei had introduced the *Masaki no kazura* account of the introduction of Berlin blue in *Ukiyo-e* magazine, however, the information circulated rapidly. It was quoted in Ishii Kendō's *Nishiki-e no hori to suri* (*The Cutting and Printing of Nishiki-e*) in 1929, and in Uchida Minoru's *Hiroshige* in 1932,⁵ and later appeared under the entries for '*bero-ai*' in Yoshida Teruji's *Ukiyo-e jiten* (*Ukiyo-e Dictionary*; 1945) and for '*ai-e*' in the *Genshoku ukiyo-e daihyakka jiten* (*Encyclopaedia of Ukiyo-e Illustrated in Colour*; 1982).⁶ So today, everyone knows that 'Hiroshige blue' is really Berlin blue. But the passage from *Masaki no kazura* has never been corroborated, nor in any way questioned. Here I would like to take a fresh look at the passage and its credibility; please refer to figure 1 for the relevant section of the manuscript copy of *Masaki no kazura* in the Tokyo University Library.⁷ It comprises the final section of a discussion of the various pigments used to print *surimono* and *nishiki-e*, and reads as follows:

The 'Chinese blue' (*tōai*) mentioned above [as used in admixture with safflower red (*beni*) to produce green⁸] is known in Dutch as '*berorin*'.⁹ This pigment was first used in *surimono* in 1829. One day when I visited Ōoka Unpō,¹⁰ he said that only dayflower blue (*aigami*) and indigo blue were used in *surimono*, but that it might be good to try *berorin*. [I am from Yotsuya in western Edo and run a publishing business.]¹¹ So I obtained some and tried using it on a *surimono*, finding that it had a special lustre in comparison with dayflower blue. In this way, everyone came to use it on *surimono* with *kyōka* and *haikai*. At this time it was not yet used on *nishiki-e*, but in the following year the fan-maker Iseya Sōbei of Horie-chō 2-chōme¹² printed and put on sale a fan by the artist Keisai Eisen [a student of Eizan] with a landscape of China, and on the other side a view of the Sumida River, done in both light and dark shades of the single colour *berorin*. This proved extremely popular, which other fan-makers observed and then put on sale large numbers of all-blue *aizuri* fans. Among book publishers, Nishimura Yohachi of Bakuro-chō published the *Thirty-Six Views of Mt. Fuji* by Hokusai, printed in *berorin*. This led again to a great fad, double that of the fans, and from this point *berorin* came to be used in many other *nishiki-e* as well. I thought it might also be a good idea to use it as a blue ink for grading *haikai*.



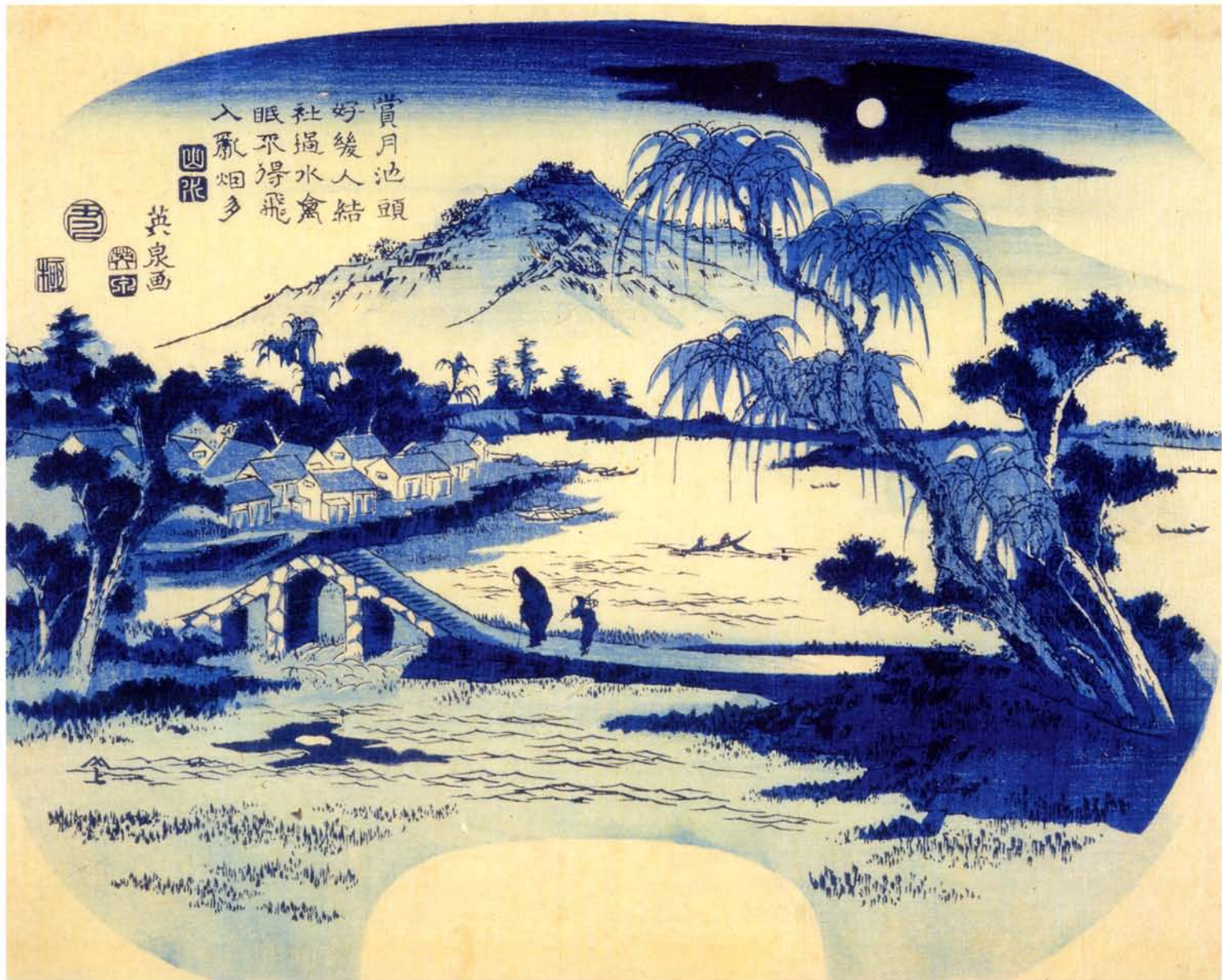
Even though *Masaki no kazura* appears to have been compiled more than a quarter-century after the events described,¹³ the many precise details of this account are compelling, and Tōho's occupation as bookseller and avocation as *haikai* poet make him a credible witness. Until now, however, none of the details of this account have ever been corroborated, either the first section in which Tōho claims to have personally introduced Berlin blue into *surimono* in 1829, even before (he claims) it was used in *nishiki-e*, or the following section in which he describes the publication of a new type of fan print by Eisen in 'both light and dark shades of Berlin blue' and a consequent fad for such *aizuri* prints in Edo that led directly to Hokusai's *Thirty-Six Views*.

As one crucial piece of corroboration for Tōho's account, I here wish to introduce what I am convinced must be one side of the actual Eisen fan print that Tōho describes, that depicting a 'Landscape of China' (*Morokoshi sansui*) (fig. 2), from the collection of the Brooklyn Museum of Art in New York.¹⁴ As we shall see, this print corresponds in almost every aspect to the description in *Masaki no kazura*, differing only in mistaking the given name of the publisher as 'Sōbei' rather than 'Sōemon', and – more importantly – in the presumed date of publication, which Tōho claimed to be 1830, whereas the Brooklyn print bears a censor's seal of 1829. This suggests that the *Masaki no kazura* account is generally credible and accurate, but also urges caution with respect to the particular details.¹⁵ In any event, the time is ripe for a much closer look at the exact circumstances in which Berlin blue suddenly became such a dominant colour in the ukiyo-e palette in the years 1829–31, thereby enabling a clearer view of the exact process and broader meaning of the 'blue revolution' in ukiyo-e.

Blue in Prints before Bunsei

Before the appearance of imported Berlin blue in *nishiki-e* of the late Bunsei period, the blue pigments available for printing were few in number and encumbered with various disadvantages. The two basic mineral pigments used for blue in painting, azurite (*iwa-gunjō*) and smalt (*hana-gunjō*), provided rich hues but only in particle sizes that were too coarse to yield smooth colours when printed with woodblocks. In addition, the cost of such mineral pigments was in all likelihood prohibitive for ordinary *nishiki-e*.¹⁶

Thus, the only practical colorants for printing in blue were two vegetable colours, each with certain limitations. One was extracted from the petals of dayflower (*tsuyukusa*) and stored in the form of dyed pieces of paper known as *aigami* ('indigo paper', although no true indigo was involved), which in turn became the common name for the colourant itself. *Aigami* yields a lovely blue when printed, but it is



2. Keisai Eisen. *Morokoshi sansui* (*Landscape of China*), 1829. Aizuri fan print in Berlin blue; 24.1 x 30.2 cm. Courtesy of the Brooklyn Museum of Art, Gift of Frederic B. Pratt (42.91). Photo: Justin Van Soest.

sensitive to light and especially to humidity, which leaves areas of pale brown on many of the surviving prints on which it was used.¹⁷ (It remains in use among dyers of cloth today for drawing the outline designs in *yūzen* paste-resist dyeing, since it disappears when the fabric is rinsed in water.) *Aigami* was nevertheless widely used in ukiyo-e for its pleasing colour; indeed, the ‘blue revolution’ may be more dramatic with hindsight than in fact it seemed at the time, since considerably more *aigami* must have offered itself to the eyes of contemporary customers than to later collectors and scholars. We need to recall, in particular, that the sky and water in many landscapes of the pre-Bunsei era, now reduced to an unappealing yellow-brown, were once a fresh and lovely blue. It was at best, however, a fairly light tone of blue, and could never produce deeper or brighter shades.

The other organic blue was natural indigo (*tade-ai*), which was widely used in both prints and paintings. The pigment was fairly costly, however, since it had to be extracted either from the surface froth of fermenting indigo or from cloth that had already been dyed with indigo, both laborious processes that yielded ‘indigo sticks’ (*aibō*, or, as in Tōho’s account, *airō*, ‘indigo candles’, after the cylindrical form) for use by painters.¹⁸ Indigo also has a low tinting strength, so that relatively large amounts are needed to achieve good colour. It will fade over time with



3. Utagawa Kunisada. 'Mokuboji bosetsu' (Evening Snow at Mokuboji), from the series *Edo hakkei* (Eight Views of Edo), c. 1820. Ōban colour woodblock triptych. National Museum of Ethnology, Leiden, Jan Cock Blomhoff Collection.

exposure to light, although it is much more stable than dayflower.¹⁹ Finally, the hue of the extracted indigo pigment tends to the greyish green, yielding fairly dull blues when printed.

At the same time, it seems clear that the quality of indigo *aibō* and the techniques used to print it were improving throughout the Bunsei period, prior to the regular use of Berlin blue in Edo *nishiki-e* after 1830. This improved use of natural indigo effectively marks the first stage of the 'blue revolution' in Japanese prints. A striking example is the Kunisada triptych 'Mokuboji bosetsu' (Evening snow at Mokuboji), as seen in figure 3, which has been dated circa 1820 on stylistic grounds by Sebastian Izzard.²⁰ According to the scientific analysis of Shimoyama Susumu and Noda Yasuko, the several shades of blue on the women's kimonos and the *bokashi* gradations on the water are all printed in natural indigo.²¹ The effect is so striking that it is easy at first glance to mistake it for Berlin blue, as I myself did in an earlier version of this article.²² At any rate, examples like this clearly demonstrate that by the early 1820s, natural indigo could be printed to much more striking effect than ever in the past.

The Growing Import Trade in Berlin Blue

Berlin blue had been known in Japan for well over half a century when it began to appear in prints of the Bunsei era, first in Osaka and then in Edo. Described as 'the first of the modern pigments',²³ it was discovered by accident in about 1704–06 by a colour-maker in Berlin who was searching for a cheap substitute for cochineal red.²⁴ The new colourant spread rapidly throughout Europe in the 1720s and on to the New World and Asia in the mid-eighteenth century.

The first known reference to Berlin blue in Japan appears in Hiraga Gennai's *Butsurui hinshitsu* (The Qualities of Natural Products) of 1763, a catalogue of various unusual items and raw materials that had appeared in a series of exhibitions in Edo.²⁵ Gennai claimed that it was a 'deeper and brighter colour than azurite', and presumably, the actual pigment was already available through the Dutch or Chinese in Nagasaki. A similar description, derived from Gennai's, appears in a 1778 text of Satake Shozan, the daimyo of Akita and leader of the 'Akita School' of painters active in Edo at the time.²⁶ It has been claimed that the pigment was actually used in certain paintings of the Akita School, although probably never in great quantities.²⁷

Before going further, some explanation of terminology is in order. In Dutch trading records of the time, the pigment was known as 'Berlyns blaauw',²⁸ from which came the Japanese

Table 1: Chinese and Dutch Imports of Berlin Blue to Japan, 1782–1862

Year	Quantity (<i>kin</i>)		Price (<i>monme</i>)		Year	Quantity (<i>kin</i>)		Price (<i>monme</i>)	
	Chinese	Dutch	Chinese	Dutch		Chinese	Dutch	Chinese	Dutch
1782	2*		18*		1823		125		108
1783					1824	4	277	9	105
1784					1825	46	22	87	92
1785					1826	1453	198	41	52
1786					1827	1940	180	39	43
1787					1828	2475	145	31	24
1788	235		25		1829	206		27	
1789					1830	2204		14	
1790					1831	70	80	24	31
1791					1832	2031		23	
1792					1833	931		24	
1793	38—		29		1834	1010		28	
1794					1835	7950		12	
1795	16		37		1836	11710		19	
1796					1837	10363	60	13	17
1797					1838	6078		11	
1798		2		**	1839	2302		19	
1799		6		220	1840	750		27	
1800	9		47		1841	5303		26	
1801					1842				
1802			225		1843	9687	100	27	91
1803	262	10	117	184	1844	21183		21	
1804					1845	2740	198	27	61
1805		164			1846	8637	216	43	57
1806		260		221	1847	8318	190	30	52
1807					1848	26174	280	40	78
1808		83		74	1849	56103	240	16	88
1809					1850	23081	220	13	68
1810					1851	16689	308	14	60
1811					1852	5608	205	28	78
1812					1853	14930	97	26	86
1813					1854	3422		24	
1814					1855				
1815	1		278		1856	73		**	
1816		78		456	1857				
1817		313		537	1858	44		69	
1818		153		252	1859	12902		13	
1819		69		110	1860	4200		14	
1820		116		134	1861	8304		14	
1821		218		127	1862	2334		24	
1822									

Source: Miyashita Saburō, 'Jinkō konjō (Purushian buruu) no mozō to yunyū', in Arisaka Takamichi and Asai Mitsuaki, eds., *Ronshū Nihon no yōgaku III* (Osaka: Seibundō Shuppan, 1995), 131–4. Figures have been rounded to the nearest *kin* (21.2 oz, 600 gram) or *monme*. In cases where a shipment was auctioned in lots, the italicized figure is the average of the highest and lowest prices.

* The nationality of the shipment for 1782 is not specified, simply designated as '*meshiage*'; the figures have here been placed under China for convenience.

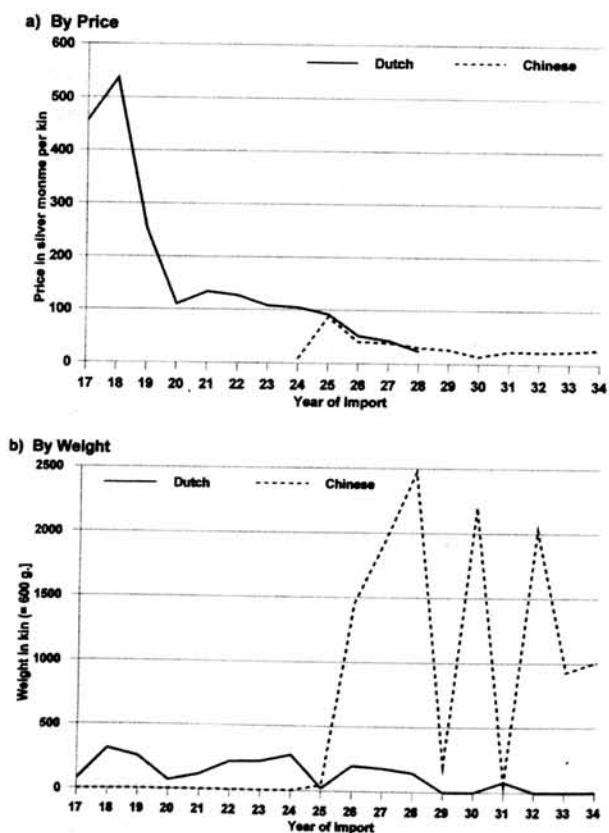
** No price records survive for these years.

transcription '*berinburaau*' that appeared in Gennai's account. All succeeding Japanese terms were derived from 'Berlin'. The earliest known appearance of the abbreviated form '*bero*' was in a letter of the Edo painter Ishikawa Tairō in about 1800,²⁹ and it is this term that seems to have become the most common among artists; this is the word, for example, that appears frequently in Hokusai's painting manual of 1848, *Ehon saishiki-tsū* (*Picture Manual on the Use of Colouring*).³⁰ Tōho in his account used the longer form '*berorin*', while other writers used '*heru*' (or '*beru*', or '*peru*').³¹ (It is worth noting, incidentally, that '*bero-ai*' ['Berlin indigo'], which is widely used in modern Japanese accounts, appears in no surviving Edo texts, and is probably a modern coinage.) Finally, the Sino-Japanese term used for the pigment in the Nagasaki trade was *konjō*, which combines two characters for 'blue' and does not refer to a place of origin.³²

In contrast to the Dutch use of 'Berlin', the most common term in English since the later eighteenth century has been 'Prussian' blue, the word that is normally used in most modern writings about the pigment (although there are dozens of other variants).³³ In keeping with both Dutch and Japanese usage in the early nineteenth century, I would insist on the form 'Berlin blue' (or, in Japanese, '*bero*') when discussing its Edo-period history. One final usage of interest is the term '*tōai*',³⁴ mentioned by Tōho, which I have found nowhere else. Although I have translated it as 'Chinese blue', it might be more accurate to call it 'foreign blue', since the term *tō* (the character 'Tang', as in the dynasty, also read *kara*) could indicate a generic foreignness, not exclusively Chinese.³⁵

Until we have some extended research into the actual use of Berlin blue in paintings,³⁶ the most important evidence for its spread in Japan at this point is that of the record of imports of the pigment itself through the port of Nagasaki. Some such evidence was first introduced by Sasaki Seiichi in an important 1985 study,³⁷ but a more recent investigation by Miyashita Saburō, a specialist in the history of medicines (the trade category in which painting pigments were included), provides a far clearer picture of the changing pattern of the import trade in Berlin

Berlin Blue Imports to Japan, 1817–34 (For data source, see Table 1)



blue.³⁸ His statistics are presented in table 1 and in the graph on the previous page summarising the changes in price and quantity for the key period of transition, 1817–34.

Assuming that these figures are fairly complete, six phases in the import of Berlin blue to Japan may be discerned:³⁹

I. 1782–97: sporadic imports, entirely by the Chinese, at low prices (range 18–37 silver *monme* per *kin*).

II. 1798–1809: imports are more frequent but still sporadic, mostly by the Dutch (often hiring American ships) at high prices (range 59–251 *monme*).

III. 1810–16: no imports by either the Chinese or the Dutch (the latter having suspended all trade with Japan during these seven years).

IV. 1817–23: imports are resumed, now on an annual basis, entirely by the Dutch, starting at very high prices but declining rapidly (from 456 to 108 *monme*).

V. 1824–28: a decisive period of transition in the import trade in Berlin blue, as the Chinese re-enter in steadily increasing quantities, far surpassing earlier levels, and at prices that decline steadily (from 87 to 31 *monme*). The Dutch continue to trade in quantities comparable to their earlier level, but the price declines and the Dutch withdraw from the trade after 1828.

VI. 1829ff: the trade is almost entirely in Chinese hands until the mid-1840s, when the Dutch re-enter the trade but at far lower levels than the Chinese. The price remains at consistently low levels, although the Dutch product is more costly.

In spite of the fluctuations in the period before 1817 (which largely reflect interruptions in the Dutch trade because of the Napoleonic Wars), the overall pattern suggests an increasing demand for the pigment in Japan from the end of the eighteenth century. This is corroborated by an intriguing story related by Miyashita of efforts by a scholar of Dutch learning named Shibue Chōhaku in the first decade of the nineteenth century to manufacture the pigment by following the recipe given in a Dutch encyclopaedia. The effort failed, but demonstrates a strong Japanese interest in procuring the colourant.⁴⁰ The steady increase in the trade after 1817 confirms this growing demand.

Before considering the actual uses of the pigment, however, the dramatic drop in price in the middle of the 1820s as the trade shifted from Dutch to Chinese ships demands some explanation. Sasaki Seiichi was the first to detect the sudden price decline, although he did not have access to trade statistics of the detail that Miyashita has provided. As an explanation, Sasaki put forth the provocative theory that the Chinese in the 1820s had begun to manufacture Berlin blue, which they were then able to sell at much lower prices than the European product imported by the Dutch.

The far more complete figures unearthed by Miyashita, however, cast doubt on Sasaki's hypothesis of Chinese manufacture, for which no corroborating evidence on the China side has yet been found (although few have looked). Ever since the 1790s, the Chinese had consistently sold Berlin blue in Nagasaki at prices far lower than the Dutch, sometimes at levels not very much above those after 1825. The long-term decline in the wholesale import price of the pigment probably reflects the increased competition between the Chinese and the Dutch for a growing market in Japan, together with a general decline of the manufacturing costs in Europe with stepped-up production. The decisive change, then, was a rising demand for Berlin blue in Japan, coupled with the ability of Chinese merchants to satisfy the demand at increasingly economical prices, in turn enabling the spread of the use of the pigment in popular prints.



4. Shunkōsai Hokushū. Ichikawa Ebijūrō I as Chienai in *Kiichi Hōgen sanryaku no maki*, performed in eleventh month, 1821, Naka Theatre, Osaka. Actor's robe is printed in Berlin blue. Courtesy of Waseda University Tsubouchi Memorial Theatre Museum, Tokyo.

Berlin Blue in Paintings and Prints

The obvious question remains: what was the source of the rising demand for Berlin blue? Until the 1820s, I would speculate that the demand came largely from painters, particularly those aspiring to a Western or 'Dutch' style. We have the account of a visitor to Nagasaki in the 1790s that paintings in the Dutch manner used Berlin blue as a basic pigment, and we may imagine that a good deal of the import was consumed in Nagasaki itself.⁴¹ But we also know that some went to the national distribution centre of Osaka, where, for example, Kimura Kenkadō, a man with strong interests in both natural history and the arts, is known to have sold a quantity of Berlin blue to the Edo Dutch-style painter Ishikawa Taiō, probably in about 1800, for a price equivalent to 400 *monme* per *kin*.⁴² In all likelihood, a careful scientific investigation of Dutch-style paintings in Nagasaki, Osaka, and Edo in the period from the 1790s would reveal numerous uses of Berlin blue.

The use of Berlin blue in prints, however, is a different matter, given the wholly different economics of commercial reproduction for a popular audience. At first, a certain resistance may have come from the reputation of Berlin blue as an exotic import for Dutch-style painters. In fact, however, the pigment was perfectly suited for the blue of colour woodblock prints, in which mineral compounds such as azurite or smalt could not be effectively used because of the large particle size. Berlin blue, by contrast, is very finely divided and prints more smoothly and evenly than dayflower or indigo. Moreover, it can both duplicate and extend the intensity and range of tones possible with either of those colours. Berlin blue may initially have cost more by weight than the domestic organic blues, but its high tinting strength meant that a tiny amount went a long way. From a printer's standpoint, Berlin blue was in every way superior to the existing blue colorants, which it would almost totally displace by the early Tenpō period.⁴³

But when did Berlin blue first come to be used as one of the colours in the polychrome *nishiki-e* sold on the urban market? According to Seisōdō Tōhō's account in *Masaki no kazura*, the new pigment was only used in Edo *nishiki-e* after 1829, the year in which he himself claims to have used it on *surimono*. And indeed, the use of Berlin blue has not yet been positively identified in any Edo single-sheet *nishiki-e* that can be firmly dated earlier than the appearance of Eisen's fan print in the summer of 1829, despite claims to the contrary by Sebastian Izzard and Shindō Shigeru.⁴⁴ Interestingly enough, however, the situation was entirely different in Osaka, where Berlin blue was used in certain actor's prints and *surimono* from at least the early 1820s. The first such case to be reported was an Osaka *surimono* by Nagayama Kōin datable to 1825, which was noted by Roger Keyes in 1984 and thereafter frequently cited in the English-language literature on ukiyo-e as evidence of the date of the first introduction of Berlin blue into ukiyo-e.⁴⁵ I have since discovered a still earlier Osaka use of Berlin blue, in an actor print by Shunkōsai Hokushū, showing Ichikawa Ebijūrō I in the role of Chienai in the kabuki play *Kiichi Hōgen sanryaku no maki*, performed in the eleventh month of 1821 at the Naka Theatre (fig. 4). Recent research by Matsui Hideo suggests that the wholesale transition from indigo to Berlin blue in Osaka actor prints came in the year 1825, fully five years earlier than Edo. Although further investigation is needed to ascertain the precise nature of this transition, Matsui's preliminary findings are very provocative.⁴⁶

It seems plausible, as Sebastian Izzard has suggested, that Berlin blue was still a 'luxury, high-priced import' in the early Bunsei period and hence used only in small quantities.⁴⁷ In this connection, I would like to introduce another set of revealing statistics that Miyashita Saburō has managed to unearth. These come from the records of an Osaka pharmacist, Ōmiya Chōzaburō, for whom Berlin blue was a major item of import trade in the late Tokugawa period – second only to ginseng in the ledger space allocated to it. For the years 1823–26, these records provide both the prices paid for Berlin blue at Osaka wholesale auctions and the retail price at which it was then sold. The records continue through the year 1845, but with no further indication of the wholesale prices. Miyashita was able, however, to obtain wholesale price figures for the years 1834 and 1841 from a separate document. His figures are summarised in table 2.

Table 2: Wholesale versus Retail Prices for Berlin Blue, 1823–26, 1834, 1841

Year	Nagasaki Wholesale Price	Osaka Wholesale Price	Osaka Wholesale Mark-up	Osaka Retail Price	Osaka Retail Mark-up
1823	108	138	28%	217	57%
1824	105	124	18%	244	97%
1825	90	93	3%	241	159%
1826	42	79	88%	223	182%
1834	28	32	14%	213	565%
1841	27	38	41%	151	297%

Note: These figures are from the records of the Osaka pharmacist Ōmiya Chōzaburō. All prices are in silver *monme per kin*.

Source: Miyashita, 128, 132–33. The figures have been averaged for each year and rounded off.

These figures, although incomplete, are provocative. They reveal that the steady decline in the wholesale import price of Berlin blue in Nagasaki during the mid-1820s was not matched by any corresponding drop in metropolitan retail prices, even with the dramatic increase in the quantities imported after the Chinese reentered the trade in 1825. We are missing the figures for years between 1826 and 1834, but the pattern of declining wholesale prices and steady retail prices remains the same. The most likely explanation is that a small number of medicine dealers were able to monopolise the market for Berlin blue, and to maintain retail prices at levels that guaranteed increasingly large profits.

This pattern suggests in turn that the gradual and piecemeal increase in the use of Berlin blue in Osaka prints of the early 1820s was a reflection not of its cost, but rather of short supply, at least until the dramatic increase of import volume from 1825, which helps explain the rapid rise in the use of Berlin blue in Osaka prints that is indicated by Matsui's recent research. One revealing bit of evidence that indirectly supports this hypothesis appears in *Chūryō manroku* (*Jottings by Chūryō*), a miscellany by an Edo botanist named Satō Chūryō published in 1826. Satō described the Dutch method of painting used by Japanese artists in Nagasaki (which he had observed on a visit there in the 1790s), and observed that 'recently there has been a great fad for these paintings in Edo as well, but they are mere curiosities, executed in ignorance of the correct method. What they sell on the market are paintings on a ground of crushed clamshell [*gofun*], using indigo [*seika*] as a substitute for Berlin blue [*peru*]'.⁴⁸

This clearly suggests that Berlin blue was not yet easily available in Edo for such inexpensive paintings, and the most likely reason is short supply. The same would presumably be true for prints, although Izzard's assertion that the colour would also be used in Edo prints of a 'luxury' type remains suggestive: surely some Edo artists and publishers had gotten wind of the use of *bero* in Osaka prints, and it would not be surprising to encounter isolated Edo examples of its use in the mid-1820s. For the time being, however, the explicit testimony of Seisōdō Tōho on this matter must remain the default presumption, namely that Berlin blue 'was first used in *surimono* in 1829', and that 'at this time it was not yet used on *nishiki-e*'. It should be noted, incidentally, that none of the *surimono* with Berlin blue that Tōho claims to have produced in 1829 have yet been identified. If his account is accurate, however, a systematic search for an Edo *surimono* datable to 1829 using Berlin blue may be in order.

Finally, there remains one further possibility of the use of Berlin blue in Edo prints before 1829, not in the *surimono* or *nishiki-e* mentioned by Tōho, but rather in book illustrations. My tentative hypothesis is that it was precisely in this format, in the mid-1820s, that both Berlin blue and the all-blue *aizuri* style came together for the first time in the work of Keisai Eisen. But before introducing the evidence, it is necessary now to go back in time and look at the precedents for *aizuri* prints in general.

5. Kanō Eiryō with poem by Kujō Naozane.
Arima Fuji yuki (Arima Fuji in the Snow), 1770.
 Copied from the original by Abbot Yūjō. From
Arima rokkei (Six Views of Arima), fol. 6v–7r.
 Printed *aizuri* book in indigo blue; 17.9 x 26.4
 cm. Courtesy of Kakimori Bunko, Itami.



The Growing Appeal of Monochrome Blue on White

Aizuri, or the printing in monochrome blue on a white background,⁴⁹ is the specific format, we are told in *Masaki no kazura*, that triggered an unprecedented fad for blue at the end of the Bunsei period. The term *aizuri* had long been used for textiles dyed in indigo on a white ground of silk or ramie, and later cotton, using such methods as wax resist or stencils. In works on paper, the use of indigo either as a substitute for black ink (*sumi*) or in mixture with it, seems to have precedents in both China and Japan, although they remain to be documented.⁵⁰ In the Edo period, however, the printing of pictures in monochrome blue was unusual before the Bunsei period. The earliest example mentioned in the literature is a puzzling reference to ‘pictures printed in blue (*aizuri-e*) pasted to Chinese fans’ in Kyoto in the Hōei period (1704–11).⁵¹ No such fans are known, nor is it clear what they might have looked like. A far more important precedent that does survive is the printed book *Arima rokkei (Six Views of Arima)*, published in Kyoto in 1770, which features six landscapes of the Arima hot springs (located inland from the modern city of Kobe) and accompanying Chinese poems (fig. 5).⁵² This work was printed in a single tone of natural indigo, revealing the characteristically blue-grey hue of that pigment.⁵³ Although apparently an isolated example, *Arima rokkei* reveals the distinctive sense of distance and refinement imparted by the exclusive use of blue.

A precedent much closer to the Bunsei era, although still a Kyoto production, is a small, curious copperplate etching printed entirely in a single shade of indigo blue (fig. 6) that was first introduced by Matsuki Hiroshi in a 1983 commentary on the origins of the *aizuri* prints in Hokusai’s *Thirty-Six Views of Mt. Fuji*.⁵⁴ It is a curious view of a Western scene (identified by the Kobe Municipal Museum as ‘felling a tree’, although it appears that it may rather depict an execution) by the Kyoto artist Inoue Kyūkō, and bears a date of Bunka 12 (1815). Other Kyoto copperplates – some of them landscapes – are known in *aizuri* states, but none bear such an early date as this one. Of particular interest on this print are five radiating creases in the paper, suggesting that it was once mounted on a folding fan.

It is entirely plausible that these Kyoto *aizuri* etchings were known in Edo, and may have provided a direct inspiration for Eisen, the critical figure in the introduction of *aizuri* to Edo. Matsuki introduces evidence that Eisen was actually acquainted with one of the Kyoto copperplate artists, Naka Isaburō, who may well have provided the idea.⁵⁵ At any rate, Eisen



6. Inoue Kyūkō. *Batsuboku zu* (*Felling a Tree*), dated 1815. *Aizuri* copperplate etching in indigo blue. 12.1 x 7.2 cm. Courtesy of Kobe City Museum.

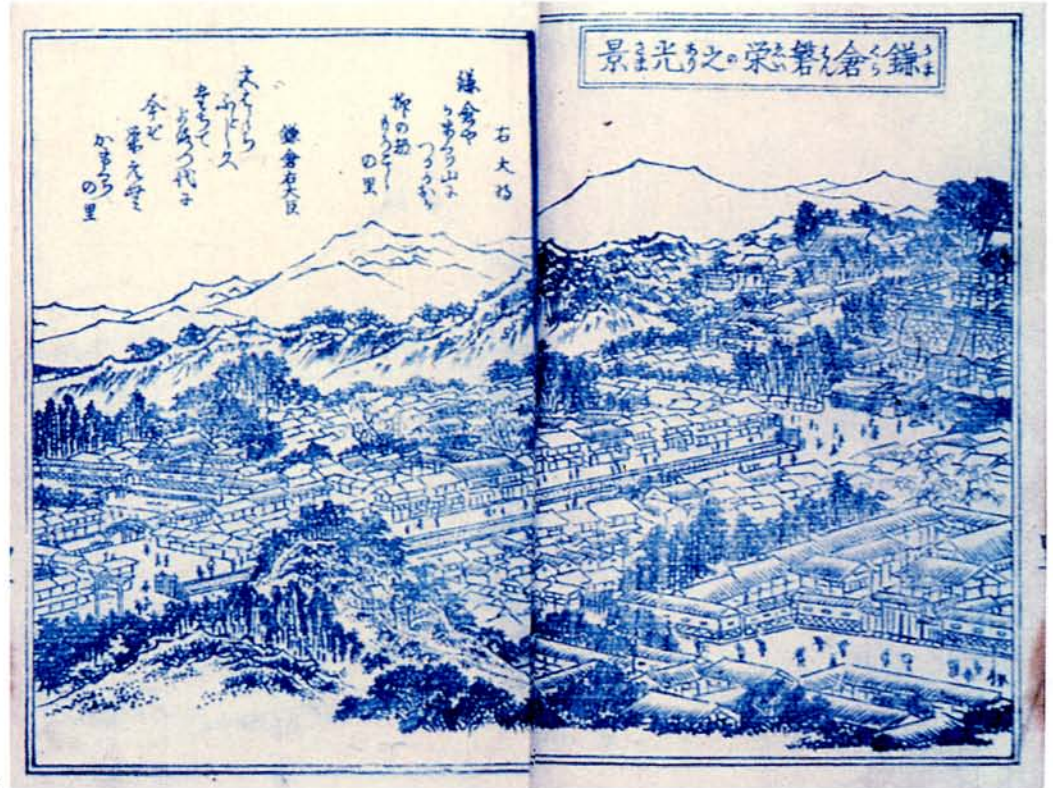
designed a small number of frontispiece illustrations for printed novels in the mid-1820s that were not only in the all-blue *aizuri* style that had already appeared in Kyoto, but that also seem to have been the earliest known use of Berlin blue in Edo.⁵⁶ These illustrations were executed with only a single block, in one shade of Berlin blue, and appeared in the type of novel known as *ninjōbon*, ‘books of sentiment’, the earliest known example being *Nokinarabi musume hachijō* of 1824, which includes a fine panoramic view of the city of Kamakura (fig. 7).⁵⁷ Two years later, similar *aizuri* prefaces with illustrations attributed to Eisen appeared in all three volumes of *Kuruwa zōdan* (*Tales of the Brothel*; 1826) (fig. 8).⁵⁸

An important caveat is in order, however, concerning these single-block *aizuri* illustrations in Berlin blue, which even though originally published in the mid-1820s may possibly be reprints dating from 1830 or later, and the first editions may have been in black (*sumizuri*). A report in fact exists of such a *sumizuri* edition,⁵⁹ but this does not necessarily mean that it preceded the *aizuri* version, since later reprints were typically in cheaper and simpler formats. It would be necessary to compare both editions closely to determine which came first, a task that remains for future research. For the time being, however, I wish to propose that these single-block illustrations in Berlin blue by Eisen from as early as 1824 may mark a preparatory stage for the emergence of *aizuri* in the full *nishiki-e* technique that he would finally create in the fan print of summer 1829.

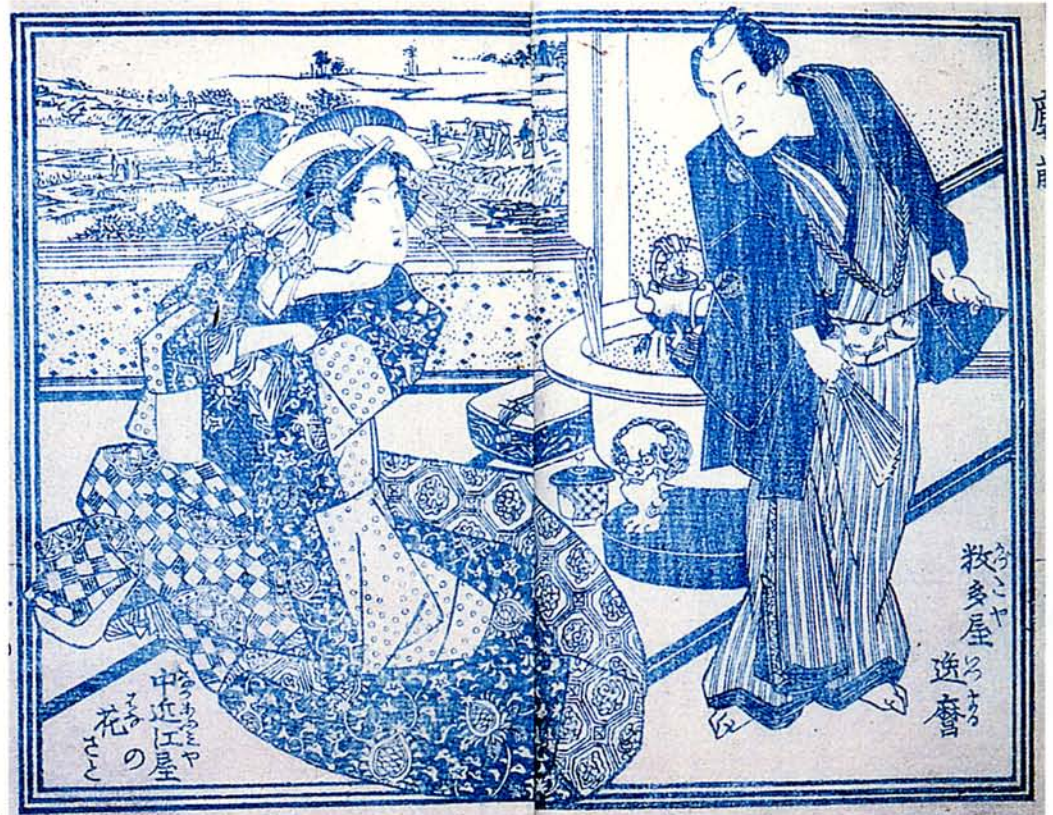
Apart from these specific precedents for the printing of blue – whether indigo or Berlin blue –

7. Keisai Eisen. 'Kamakura han'ei no arisama'
 (View of Kamakura Thriving). Aizuri illustration
 in Berlin blue for preface of *Nokinarabi
 musume hachijō*, vol. 3, 1824. Printed
ninjōbon. Private collection.

8. Attributed to Keisai Eisen, *aizuri* illustration
 in Berlin blue from *Kuruwa zōdan* (*Tales of the
 Brothel*) by Bisanjin (Tōri Sanjin), 1826.
 Printed *ninjōbon*. Courtesy of Tokyo Municipal
 Central Library.



7



8

9. Hokusai. 'Mayoke' (Horse Talisman), on the theme of the *Eight Views of Ōmi*, from the series *Umazukushi* (All Variety of Horses), 1822. *Surimono*. Rijksprentenkabinet, Rijksmuseum, Amsterdam.

on white paper, a much broader and more pervasive spread of a blue-and-white aesthetic was underway in early nineteenth-century Japan in two key areas of daily life: clothing and ceramics. Indigo-dyed cotton (*aizome*) had been spreading steadily since the early Edo period, and by this time had virtually become the national dress of commoner Japan. In rural clothing, the dye was very dark, almost black, although often patterned with white, but in the city of Edo, indigo also was dyed in lighter and brighter hues for summer *yukata* using the *nagaita* stencil technique that had been perfected by the Kansei period.⁶⁰ By Bunsei, *yukata* in medium-sized (*chūgata*) blue patterns were the normal summer wear for the people of Edo, and it was a natural extension of this distinctive blue-and-white aesthetic to Eisen's innovation of summer fans printed in blue on white. It was also in Bunsei that indigo was making its way literally into the people in the spread of tattooing among the certain groups of artisans and labourers, with blue emerging as the dominant colour – as we see in the tattooed heroes of Kuniyoshi's various *Suikoden* print series from late Bunsei that themselves served as model designs for Edo tattooists.⁶¹

The other realm of blue-and-white in daily life was *sometsuke*, white porcelain with cobalt blue designs. It was precisely in the early nineteenth century that blue-and-white porcelain was diffusing widely and rapidly among commoners, not only traditional Hizen ware, but the 'new ware' (*shinsei-yaki*) blue-and-white from the Seto kilns that rapidly emerged from the Kyōwa period (1801–04). Recent archaeological excavations, for example, show a steadily increasing percentage of blue-and-white porcelain among the ceramic utensils used in Edo daily life in the early nineteenth century. Thus, *surimono* and *nishiki-e* of the Bunka-Bunsei era also offer increasingly frequent depictions of blue-and-white utensils as well as indigo-dyed cotton, often with landscape designs. A good example is a Hokusai *surimono* of 1822 incorporating the 'Eight Views of Ōmi', with the landscape designs appearing on various items of daily use, notably a blue-and-white porcelain bowl and an indigo cotton hand-towel (fig. 9), showing in a single image the two key modes for the expansion of blue-and-white designs in daily life that provided a crucial matrix for the 'blue revolution' in *nishiki-e*. It may, in fact, have been precisely blue-and-white porcelain landscapes that inspired Eisen to design his 'Landscape of China' to which we must now turn.

Eisen's 'Landscape of China' and the Fad for Berlin Blue *Aizuri*

Against this background of an increasing taste for blue on white, we must consider the second part of the *Masaki no kazura* account, in which Tōho writes that in the following year [1830], the fan-maker Iseya Sōbei of Horie-chō 2-chōme printed and put on sale a fan print by the artist Keisai Eisen 'with a landscape of China on one side, and a view of the Sumida River on the other, done in both light and dark shades of the single colour *berorin*'. We should first note a key piece of documentary evidence that corroborates Tōho's account, namely Eisen's own claim just a few years later in 1833, when he wrote for his own entry in his revision of the *Ukiyo-e ruikō* (*Lineages of Ukiyo-e Artists*) that he 'did many fan prints, and the recent *nishiki-e* in *aizuri* became popular as a result of his invention (*kufū*)'.⁶²

The fan print from the Brooklyn Museum of Art that I wish to introduce here corresponds almost exactly to the details given in *Masaki no kazura*. It is signed 'Eisen ga', followed by a seal 'Eisen', while the publisher's mark to the lower left on the surface of the pond is that of Iseya Sōemon of Horie-chō 2-chōme – the 'Sōbei' of Tōho's account surely being a simple error of memory. The colourant is pure Berlin blue, as confirmed by chemical tests at the Brooklyn Museum of Art conservation laboratory.⁶³ And it is clearly a 'landscape of China', an unusual theme in ukiyo-e prints, complete with a poem in Chinese followed by the seal '*sansui*', the term for Chinese-style landscapes. The one crucial divergence from Tōho's account is the date, which appears just before the censor's '*kiwame*' seal as a date seal reading '*ushi*' (year of the ox), or 1829 (Bunsei 12) – not 1830 as the term 'following year' (*yokunen*) of Tōho's account clearly indicates. In fact, I believe, 1829 makes much more sense as the year in which the fad began. I

馬護
馬除

初日新

鳴てり

喜ま

あつ
お中

ゆきの

山と

見ても

まらゆき

三早亭

真湖

初日新の年





10

10. Dish with Chinese landscape and pavilion, underglaze blue and overglaze enamels. Arita ware, c. 1690–1700. Diameter: 23.6 cm. Courtesy of Kyushu Ceramic Museum, Shibata Collection.



11

11. Large dish with Chinese landscape, underglaze blue. Shida ware, c. Meiji period. Diameter: 56.0 cm. Courtesy of Shiota-chō Rekishi Minzoku Shiryōkan.

believe that this one-year discrepancy was simply an error of Tōho's memory: we must recall that *Masaki no kazura* seems to have been composed some twenty-five years after the events described here.⁶⁴

A further key correspondence with the Eisen print is the phrase 'done in both light and dark shades of the single colour *berorin*'. Whereas Eisen's earlier book illustrations in Berlin blue had been in one uniform shade, with a single block, the fan print has been executed in the full *nishiki-e* technique, involving as many as seven or eight printing steps: a key-block in very dark blue, two or three additional colour blocks for lighter tints, and still more steps for the gradations at the top of the print and elsewhere. It is a quantum leap in technical sophistication beyond all other previous examples of *aizuri* printing in Japan.

Eisen's 'Landscape of China' skilfully displays the potential of this new type of *aizuri*, which by using multiple blocks and gradations enabled delicate variations on a single colour. The obvious precedent for such variations was the use of *sumi* in ink painting, according to classical principles of '*nōtan*' – exactly the 'light and dark' technique that Tōho described. Various high-quality illustrated books of the Kanō, Nanga, and Shijō schools had in fact already achieved these painterly effects in printing. Rarely, however, had these techniques been mobilised for single-sheet *nishiki-e*. Nor had it occurred to anyone to handle a colour in the manner of *sumi*, which was the essence of Eisen's '*kufū*', made possible by the extraordinary versatility of Berlin blue. (It should also be noted, however, that *sumi* itself may well have been mixed with Berlin blue in this and later prints in the new multi-shade *aizuri* manner, in order to achieve darker and more subdued tones of blue.)

Before turning to the 'Landscape of China', we must pause to recall that it constitutes only one-half of Eisen's accomplishment as reported by Tōho, namely 'a landscape of China, and on the back side a view of the Sumida River'. The view of the Sumida remains to be discovered, although a somewhat later *aizuri* riverside landscape by Eisen gives a sense of what it might have looked like.⁶⁵ In referring to the Sumida view as the 'back' (*ura*), however, Tōho implies that the Chinese landscape was the 'front' (*omote*) of the fan, and his primary focus of interest. Why then did Eisen choose a Chinese landscape for his new technique of multi-shade blue printing? The

Ukiyo-e ruikō tells us that Eisen himself had 'a fondness for Song and Ming pictures', so perhaps personal taste was involved, although it had not yet revealed itself in any of the artist's own landscape prints.⁶⁶ Perhaps Eisen also wanted to draw attention to his new 'invention' by using an unusual theme. Or perhaps his decision was related to the perceived 'Chinese-ness' of the pigment used, the 'Chinese blue' (*tōai*) described by Tōho.

I would propose, however, that the most important inspiration for Eisen's 'Landscape of China' was blue-and-white porcelain with Chinese-style landscape designs. The subtle gradations and wide tonal variations of the cobalt blue underglaze offered a challenge to the printer that was comparable to replicating the tones of ink-painting in *sumi*. The possibility that porcelain designs in general may have inspired *aizuri* prints was suggested by Kojima Usui in 1929, but the specific Chinese landscape connection makes the case even more persuasive for the Eisen fan print.⁶⁷ From the early Tokugawa period, Arita ware with Chinese-style landscapes had circulated throughout Japan, disseminating many of the set features we see in the Eisen print: figure 10, for example, shows an Arita dish of the later seventeenth century with a design roughly comparable to that of the Eisen landscape. By the Bunsei period over a century later, large dishes (*ōzara*) with landscape designs were becoming increasingly common. Such large dishes were produced in considerable quantity from the Bunka period onward, especially in the form of the Hizen ware known as Shida-yaki, the majority of them with landscape designs.⁶⁸ Figure 11 shows a Shida-yaki plate of the Meiji period that reveals a clear similarity to the Eisen print in composition and taste. We are reminded that the Chinese landscapes with which ordinary Japanese were most familiar were neither paintings nor printed book illustrations, but rather the blue-and-white porcelain that remains a familiar element in ordinary Japanese food service today.

Whatever the inspiration of Eisen's 'Landscape of China', we can see that it immediately announces itself as 'Chinese' in at least three distinctive motifs. One is the image of two figures, a stooped-over elder followed by a youth with a load, approaching a circle-arched stone bridge. Such bridges in Japan, where building in stone was rare and the circular form unusual, were always perceived as 'Chinese', even though they may have been replicated under such names as 'drum bridge' (*taikobashi*) or, for a double arch, 'spectacles bridge' (*meganebashi*). Moreover, the figures would always be read as a Chinese scholar with servant boy. Beyond the bridge to the left is a group of buildings that similarly announce themselves as Chinese, a dense assemblage of two-story earthen buildings, depicted on the gable ends in a distinctive manner (similar to Japanese-style earthen warehouses). The third distinctively 'Chinese' element is the Chinese poem and the seals and signatures, which together occupy their own textual space. The poem, of yet undetermined origin, is inscribed in a somewhat affected, presumably 'Chinese', style:

Fine moon-viewing by the edge of the pond,
as friends in groups stroll by,
rousing the dozing water birds,
which rise in a cloud of mist.

Of the four seals that follow, '*Sansui*' (*Landscape*) and 'Eisen' declare the theme and artist, followed by the *kiwame* and cyclical year seals. Whereas the guild that produced single-sheet ukiyo-e and illustrated books was required to show a generic '*kiwame*' seal in this era, the fan print guild alone was expected to add a seal for the exact year – a chance advantage for the historian.

One final motif worth mentioning is the full moon – usually a sign of autumn, and here perhaps used consciously in conjunction with the blue colour to provide a tone of coolness to the summer fan. By blending with the '*ten-bokashi*' gradation along the top, it suggests simultaneously a bright moon in a dark sky and a rising moon in a pale evening sky. The full moon was of course common in Japanese-style landscapes, but here it also complements the



12. Keisai Eisen. *Gekka ryojin (Travellers Beneath the Moon)*, c. 1840. Ōban colour woodblock print, vertical diptych. Courtesy of Christie's.

'Chinese' quality of the image. In a witty optical manoeuvre that was not unknown but certainly rare in traditional landscape painting, the same moon, ringed by the same dark clouds, is shown reflected off the surface of the pond just in front of the bridge.

Whatever prompted Eisen to use a 'landscape of China' for one side of his fan in the new *aizuri* technique, the theme does not seem to have enjoyed any sustained popularity. There survives an *aizuri* fan print of a Chinese landscape by Sadahide dated 1840, over a decade later, and Eisen himself around the same time designed two well-known vertical diptychs (*kakemono-e*) of Chinese landscapes, one of which (fig. 12) seems to echo back to his earlier fan print in its composition.⁶⁹ Many of Hokusai's great landscapes of the 1830s of course incorporate elements of Chinese landscape style, but prints as overtly 'Chinese' as this fan print of Eisen remained unusual.

Tōho's account goes on to relate that in the wake of the success of the Eisen print, other fan-makers hastened to issue their own *aizuri* fan prints in Berlin blue. Since we now know that the Eisen print appeared in 1829, not 1830 as related by Tōho, I would speculate that when the print first appeared in the summer of 1829, it was already too late in the season for other publishers to respond with new prints in Berlin blue, so the summer of 1830 launched the real vogue for the new type of *aizuri* fan print devised by Eisen. In fact, two surviving fan prints in Berlin blue with a date of 1830 have already surfaced. One is from the collection of the Brooklyn Museum of Art, a Kunisada landscape entitled 'Miho no ura' (Miho Shore) (fig. 13), and the other is an untitled print of summer flowers by Sadahide (fig. 14).⁷⁰

Each of these striking prints pushed the new *aizuri* technique in new directions, as different from each other as from Eisen's Chinese landscape. Kunisada's 'Miho Shore' with Fuji in the distance eliminates almost all lines, relying on a diversity of gradations to achieve subtle effects of clouds and recession in space. Sadahide's depiction of summer flowers, in contrast, relies on very fine lines in the dark blue key-block (possibly an admixture of Berlin blue with *sumi* or indigo), over which are printed five separate shades of blue to distinguish among the tangle of ten or more different plants, creating a novel effect. What striking summer fans these must have been, with their multiple shades of cooling blues! Both prints suggest how much the novelty of the multi-block *aizuri* technique generated a spirit of innovation in design and expression, thus paving the way for Hokusai's *Fuji* series later the same year.

Aizuri in the Conception of Hokusai's Thirty-Six Views of Mt. Fuji

Finally, we can turn to Tōho's assertion of a direct linkage between the fad for multi-block *aizuri* prints in Berlin blue that was begun by Eisen, and the publication of Hokusai's *Thirty-Six Views of Mt. Fuji* by Nishimura Yohachi (Eijudō). This connection has long been obscured by the persistence of Edmond de Goncourt's misguided dating of the series as published 'between 1823 and 1829',⁷¹ an assertion that has found its way into so many books on ukiyo-e that it is still repeated today.⁷² The problem was compounded by Kojima Usui, who in a complex and detailed discussion of the dating of the *Fuji* series in 1931 basically supported Goncourt's dating as plausible (although suggesting that the series probably terminated later, in about 1831).⁷³ He reached such a conclusion despite the fact that he introduced as part of his argument a document that in fact is critical to disproving Goncourt's dating; it is also basic to the story of *aizuri* in Berlin blue.

The document introduced by Kojima was an advertisement by Nishimura Yohachi for the *Thirty-Six Views of Mt. Fuji* that appeared at the end of another of Nishimura's publications, volume 12 of *Shōhon jitate (Stories in Promptbook Form; 1815–31)*, a series of kabuki-derived stories in the illustrated *gōkan* format by Ryūtei Tanehiko.⁷⁴ The colophon date for this volume reads 'Bunsei 14', a year that would have corresponded to 1831, but in fact never came to pass, since the year-period was changed to Tenpō on the tenth day of the twelfth month of Bunsei 13 (1830). This means that the blocks for the advertisement were cut before the change,

13. Kōchōrō Kunisada. *Miho no ura* (*Miho Shore*), 1830. *Aizuri* fan print; 22.4 x 29.1 cm. Courtesy of the Brooklyn Museum of Art, Gift of Louis V. Ledoux (40.137). Photo: Justin Van Soest.



13

14. Gountei Sadahide. *Natsukusa* (*Summer Flowers*), 1830. *Aizuri* fan print. Courtesy of Shindō Shigeru.



14

probably in the eleventh month of 1830. The text of the advertisement, which is illustrated in figure 15, reads:

Thirty-Six Views of Mt. Fuji, by Zen Hokusai Iitsu; single-sheet *aizuri*. One view to each sheet, to be published one after another.

These pictures show how the form of Fuji differs depending on the place, such as the shape as seen from Shichirigahama, or the view observed from Tsukudajima: he has drawn them all so that none are the same. These should be useful for those who are learning the art of landscape. If the blocks continue to be cut in this way, one after another, the total should come to more than one hundred, without being limited to thirty-six.

The first question, of course, is whether this advertisement was intended to announce the beginning of the *Thirty-Six Views*, or whether possibly the series had in fact begun several years earlier, as Goncourt alleged. Kojima clearly assumed the latter, taking the phrase ‘if the blocks continue to be cut in this way, one after another’ (*kono gotoku oioi chōkoku sureba*) to mean that the series was already well under way.⁷⁵ I agree that the text implies the series to have already begun, but not that a great many had already been published: the prospect of a final total of one hundred was surely no more than advertising hyperbole, a boast that the new series had already gained a popular momentum.

Kojima’s reaffirmation of Goncourt’s proposed date of 1823 for the commencement of the *Thirty-Six Views of Mt. Fuji* was not seriously challenged until 1965, in an important article by Suzuki Jūzō.⁷⁶ Suzuki first noted that despite a careful search through other Eijudō publications of the Bunsei era, he had been unable to find any earlier example of the advertisement; he also observed that the same advertisement was repeated several times over the next few years after 1830.⁷⁷ He further noted that the text itself, taken at face value, reads like the announcement of a new series. Finally, he made note of the *Masaki no kazura* text, which clearly suggests that the series began in *aizuri* only in 1830 as a consequence of the fad in *aizuri* fan prints. Our new knowledge that the Eisen fan print in fact appeared one year earlier, in 1829, does not weaken the basic argument that the *Thirty-Six Views* began as a new *aizuri* publication, precisely as Tōho recorded and as the *Shōhon jitate* advertisement proclaimed.

Suzuki next considered the order of publication of the *Thirty-Six Views*, observing that the forty-six prints in the series can be divided into five distinct groups based on signature style. Although he clearly implied that each group was produced in a single time span, Suzuki cautiously avoided committing himself to any particular chronological order for the five groups – with the exception of group 5, distinctive to the ten ‘back Fuji’ (*ura-Fuji*) prints with the key-block in black rather than blue, which are universally accepted as a later supplement to the ‘front’ thirty-six. He did, however, list the groups in numbered order, from ‘1’ to ‘5’, and the reader must be forgiven for thinking that the order was something less than random. I would suggest that, in fact, Suzuki must have thought carefully about the order of his list, and even though he did not explain his reasons, we may detect the logic. He must have first observed that all the signatures could be immediately divided into two types by the name that the artist used: ‘Hokusai *aratame* Iitsu’ for group 1, and ‘Zen Hokusai Iitsu’ for all the other groups. Although the meaning is pretty much the same (‘Hokusai renamed Iitsu’ versus ‘Iitsu, formerly Hokusai’), it would on the face of it seem implausible for the artist to start with one name, change to another, and then return to the original name. And since the ‘back Fuji’ series that all agreed to be last used ‘Zen Hokusai Iitsu’, it only made sense to place the ‘Hokusai *aratame* Iitsu’ group at the beginning.

The implications of this issue for the history of *aizuri* are considerable, since it so happens that the ten prints in Suzuki’s group ‘2’ are precisely the only ten prints in the series that exist in *aizuri* states (including those with faint traces of other colours, which Suzuki termed ‘semi-*aizuri*’ [*jun-aizuri*]).⁷⁸ The stakes were raised by the fact that group ‘1’ happened to include the three most daring and celebrated designs in the entire series, ‘The Great Wave’, ‘Red Fuji’, and ‘Shower Below the Summit’ – all of which by implication would have appeared first, before the *aizuri* experiment.

猿蟹虫毛のつり 六々園主人著 小本全一冊

戯場顯微鏡 歌川國貞画 彩色八全二冊

活金剛傳 立川馬馬撰 初編二編出来 歌川國貞画

四十八手関取鏡 歌川國貞画 中本全一冊

富嶽三十六景 前北齋 為一翁画 藍摺一枚

水滸傳豪傑及六 歌川國貞画 奉書三枚

此は富嶽の概の所よりて... 水滸傳の概の所よりて... 活金剛傳の概の所よりて... 四十八手関取鏡の概の所よりて... 富嶽三十六景の概の所よりて... 水滸傳の概の所よりて...

The issue was further complicated when, a decade later, the same publisher (Shūeisha) issued another reproduction of the *Fuji* series, as volume 13 of *Ukiyo-e taikei*. Kobayashi Tadashi, the commentator for the new volume, closely followed Suzuki's earlier analysis, but was more forthcoming about the order of production, asserting that the first two signature groups listed by Suzuki (which he renamed 'A' and 'B') must have preceded the next two (now 'C' and 'D').⁷⁹ As to the relative order of 'A' and 'B', he reserved judgment, simply noting that the 'B' group (of *aizuri*) might possibly have come first. Meanwhile, however, the order of the individual prints in

the new Shūeisha publication followed the exact order, 'A' through 'E', of Suzuki's original list. Until this point, all reproductions of the *Thirty-Six Views of Mt. Fuji* – including the earlier Shūeisha reproduction for which Suzuki's commentary was written – were usually ordered geographically, by the location of the sites depicted. With the wide distribution of the new *Ukiyo-e taikai* in a popular-sized edition in 1976, however, the impression was perpetuated by those who did not closely read the comments of Suzuki and then Kobayashi, that the *aizuri* group came *after* the group including 'The Great Wave' and 'Red Fuji'.⁸⁰

Kobayashi then went on to reconsider the issue several years later, in the commentary for a 1980 Hokusai exhibition catalogue. This time, he forcefully and persuasively argued that the *aizuri* group must have been the one that launched the series, rejecting any possibility that signature group 'A' (the one including 'The Great Wave') could have come first.⁸¹ Kobayashi's decisive argument for the ten *aizuri* prints of group 'B' as the indisputable beginning of the *Thirty-Six Views of Mt. Fuji* was, needless to say, the evidence of both *Masaki no kazura* and the *Shōhon jitate* advertisement, the former noting that the series began as part of the *aizuri* boom of summer 1830, and the latter appearing in late 1830 to announce it as an '*aizuri*' series and specifically referring to two of the prints that survive in a pure *aizuri* state.

Among Japan's leading ukiyo-e experts, however, the issue of the relative order of publication of signature groups '1' and '2' (or 'A' and 'B') still remains contested, as revealed in a detailed article by Asano Shūgō in 2002 that re-examines the problem at length.⁸² After first praising Kobayashi's 1980 article as an 'excellent argument that smoothly incorporates various sources and skilfully lays out the resulting analysis', Asano proceeds to focus on 'one great flaw', namely Kobayashi's failure to explain the anomaly that results from placing Suzuki's signature group '1' as second in the order of publication, suggesting that the artist suddenly shifted from one name to another and then back again.⁸³ Asano then launches into a detailed analysis of datable uses of both signatures, concluding that there was a clear break from 'Hokusai aratame Iitsu' to 'Zen Hokusai Iitsu' between early 1830 and early 1831. He seems to have overlooked other evidence, however, that shows Hokusai to have actually used both names alternately in the years 1825–30.⁸⁴ Asano himself warns, moreover, that a 'fundamental weakness' in using name changes to determine the date of prints is that 'there is almost no way to deal with the whimsies of the artist'. Hokusai, in particular, was an artist prone to such whimsies.

In the face of such uncertainty over the chronological order of the signatures, I myself remain wholly persuaded by Kobayashi's argument from the evidence of *Masaki no kazura* and the *Shōhon jitate* advertisement that the series began as an all-*aizuri* production in the second half of 1830. Kobayashi went further still, and looked more closely at the actual content of the group of ten *aizuri* with signature type 'B' as further evidence of the timing. Building on his observations, I would now like to analyse more closely the location of the ten sites depicted, and the activities shown therein, which I believe will provide even more persuasive evidence that these must indeed have been the opening works of the series.

An Interpretation of *Aizuri* in Hokusai's *Thirty-Six Views*

In his new commentary, Kobayashi offered fresh and provocative speculations on the thematic content of the ten *aizuri* landscapes. He first noted the geographic distribution of the ten sites illustrated, suggesting that they were intentionally chosen to encompass a wide range, appropriate to the beginning of the series. He then further observed that two of the prints included auspicious symbols that would have been appropriate to publication at the New Year of 1831. The objects in question are the festive kites in 'Asakusa Honganji' and the cranes in 'Umezawa'.

I would like to push Kobayashi's arguments even further, by suggesting that they provide a point of departure for sub-dividing the ten *aizuri* prints of signature group 'B' into two distinctive groups of five each, with one logically prior to the other. Roger Keyes had already suggested to me at the second international Hokusai conference Venice in 1994 that ukiyo-e prints often seem to have been published in sets of five – the same number, incidentally, that is traditionally used



16. Hokusai. *Sōshū Shichirigahama* (Shichirigahama in Sagami Province), from the series *Fugaku sanjūrokkei* (Thirty-Six Views of Mt. Fuji), c. 1830. Ōban colour woodblock print. Courtesy of The Trustees of the Chester Beatty Library, Dublin (260).

for sets of utensils for eating and drinking. It immediately struck me that the ten *aizuri* prints naturally divide into two groups of five each on the basis of a simple technical distinction: the ‘pure’ *aizuri* that exist in states using no other colours than shades of blue, and the ‘semi-*aizuri*’ group in which all surviving specimens have the subtle touch of other colours – mostly pink and green, sometimes black – provided by additional blocks. Of the ten prints listed in note 78, the following five are known in ‘pure’ *aizuri* states: ‘Shichirigahama’ (fig. 16), ‘Tsukudajima’, ‘Ushibori’, ‘Suwako’, and ‘Kajikazawa’.⁸⁵

The chronological priority of the ‘pure’ *aizuri* group is strongly indicated by the fact that it includes the two prints – ‘Shichirigahama’ and ‘Tsukudajima’ – specifically mentioned in the *Shōhon jitate* advertisement. If we analyse this group more closely in terms of geography, moreover, we discover an intriguing commonality: all are intimately involved with the theme of water, both in the geographical locales and in the activities depicted. Specifically: the beach of Shichirigahama looks out to Enoshima, the site of a shrine dedicated to Benten, the goddess of water; the island of Tsukudajima lies at the mouth of the Sumida River and at the head of Edo Bay, the critical junction of Edo as a city of water; Ushibori is a strait that stands guard over the exit of Kasumigaura as it flows to the ocean, a key link in the great water system of the Tone River basin; Suwako is the lake that provides the source of the mighty Tenryū River; and Kajikazawa is the site of the rapids at the head of the Fuji River. In the human activities depicted, liquid links are also common: bailing water from the ship at Ushibori, casting fishing lines into the torrent at



17. Hokusai. *Sunshū Ejiri* (Ejiri in Suruga Province), from the series *Fugaku sanjūrokkei* (Thirty-Six Views of Mt. Fuji), c. 1830. Ōban colour woodblock print. Japan Ukiyo-e Museum, Matsumoto.

Kajikazawa, and dragging towels through the river at Tsukudajima. And when plotted on a map, all of these strategic water sites encircle Mt. Fuji, heightening its symbolic importance as a source of water and rebirth. It is a powerful logic for the exclusive use of the colour blue, in its bright new *bero* incarnation, as the inaugural prints of the *Thirty-Six Views*.

For the second group of five, the emphasis seems to be on seasonality rather than locale, in accord with Kobayashi's perceptive observation of New Year's festivity in 'Asakusa Honganji' and 'Umezawa'. In the first group, seasonal signs are few, the human presence minimal, and the mood tranquil. In the second group, however, we see in 'Ejiri' a stiff winter wind snatching the hats from travellers (fig. 17), while the two remaining scenes of 'Mishimagoe' and 'Tōtomi Sanchū' depict busy activity in the deep mountains. Whereas figures appear mostly in twos in the first five prints, they appear here in groups of five or seven. There is more wit, more busyness, more activity: overall, more of a New Year's spirit. The added colours, although subtle, are appropriate to this more festive mode.

From these differences, I would hypothesise that the first group of five had already appeared in the late autumn of 1830, by the time that the block for the *Shōhon jitate* advertisement was cut, and that the remaining five were expressly designed for appearance at the New Year of 1831. Together, the two groups constitute a powerful and meaningful beginning of the new series, taking full advantage of the symbolism of water and rebirth in the colour blue. The question remains whether a similar approach can be pursued through the remaining signature groups of the *Thirty-Six Views* – a task that for now I will leave to the imagination of the reader. Let me simply

say that for the terminal date of the series, I would accept circa late 1833 as the most reasonable of the various dates that have been proposed.⁸⁶

I might finally venture an opinion about the order of the *Thirty-Six Views* after the initial ten *aizuri* experiments. I imagine that with the gradual addition of colour into the 'pure' *aizuri*, and with Hokusai's appreciation of the colour combinations thereby attained, he moved on to even more striking colour experiments of the sort that is epitomised by the 'Red Fuji'. In other words, I believe that Suzuki's signature group '1' (Kobayashi's 'A') came in time immediately after group '2' ('B'). What began as an experiment with shades of a single colour (doubtless encouraged or even demanded by the publisher in order to profit from the *aizuri* fad) thus moved inexorably in the direction of experimentation with other colours, and the colour combinations in turn encouraged more dramatic overall designs that would enhance the impact of those colours. But once this experimental stage was over, Hokusai fell into a routine colour scheme that characterised the rest of the series, while retaining the blue key-block and the heavy use of Berlin blue for sky, water, and cotton garments.

Let me return to the connection between Eisen's 'Landscape of China' and Hokusai's *Thirty-Six Views of Mt. Fuji*. It is particularly revealing to compare Hokusai's 'Shichirigahama' (fig. 16) with the Eisen fan print. Suzuki Jūzō has already noted the 'Chinese-like landscape style' (*kanga-fū no sansui yōshiki*) of 'Shichirigahama',⁸⁷ and I would go even further and propose a thematic resemblance between the two prints, in the broad body of water, the village by the shore, the clouds in the sky, and the distant mountain. This is not to suggest that Hokusai was inspired by the Eisen print; on the contrary, it is more likely that Eisen's own landscape style had been influenced by Hokusai. The originality of Eisen's '*kufū*' was to pursue the unity of mood between the colour blue and this commonality of landscape style that is reconfirmed in 'Shichirigahama'.

In the end, I believe that we must imagine the *Thirty-Six Views of Mt. Fuji* to have involved two critical components. On the one hand, precisely as Tōho suggested, the publisher Nishimura was eager to take advantage of the new fad for *aizuri* prints in Berlin blue, particularly in the landscape style so effectively expressed in Eisen's fan print. At the same time, the symbolic meanings of the colour blue, with its implications of water and rebirth, must have been of great personal appeal to Hokusai himself as he embarked on his 'second life'.

Blue Beyond Bunsei

The opening prints in Hokusai's *Fuji* series were by no means the only single-sheet *aizuri* in Berlin blue to follow the boom in summer fan prints, and they may not have been the first.⁸⁸ The impact of the series, however, was immense. Although originally planned entirely in *aizuri*, the series soon came to include other colours, but the key-block remained in blue; even with the ten-print *Ura-Fuji* supplement using black key-blocks, Berlin blue remained a critical colour in the composition of every print.⁸⁹

Just as the *aizuri* fan print boom begun by Eisen served to provoke Hokusai's *Fuji* series, so in turn Hokusai's success unleashed a torrent of landscape energies in the ensuing years of early Tenpō. This brief period, continuing at most to the late 1830s, witnessed the publication of the majority of the most creative and enduring masterpieces of the landscape print in Japan, particularly those by Hokusai, Hiroshige, Kuniyoshi, and Eisen himself. One notable series by Hokusai, the eight-print *Shokoku taki meguri* (*Tour of Provincial Waterfalls*), carried over from *Thirty-Six Views* the technique of a key-block in blue, to which were added various other colours, including other shades of blue. In all of the other landscapes of this period, however, both by Hokusai and his contemporaries, the key-block was its usual black, but the majority of such prints relied on an assertive use of Berlin blue in the colour composition. Sky and water were the most obvious places to use blue, but the colour appeared conspicuously in clothing as well. Note also that the distinctive green of Hokusai's landscapes was itself a result of Berlin blue, in mixture with orpiment yellow (*sekiō*). Indeed, a major consequence of the 'blue revolution' was a reconsideration

of the use of other colours as well, depending on the ways in which they worked with this powerful and flexible blue.

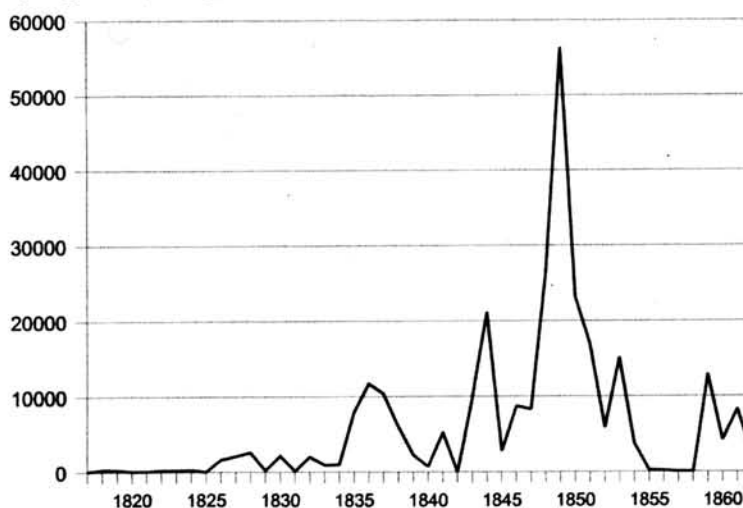
Although landscapes offered the most fertile ground for inventive design with Berlin blue, Eisen's invention of multi-shade *aizuri* was pursued throughout the following decade by a number of artists in a variety of formats. In many cases, small accents of red or yellow were added to the overall scheme of blue. A few of these were found in books, such as the illustrations by Kuninao for a *ninjōbon* in 1833–35, printed in shades of Berlin blue with red and yellow accents,⁹⁰ or an unusual book of 1834 with illustrations by Kunisada and the entire volume printed in blue (although with single blocks).⁹¹ By far the most common use of pure *aizuri* prints was for summer fans, of which far more were printed than survive, since most were put into actual use and then discarded.

Beyond this, however, virtually all of the leading artists of the day designed single-sheet Berlin blue *aizuri* in a variety of genres, including bird-and-flower and beauty prints as well as landscapes. The formats were varied as well, from *ōban* triptychs to vertical *tanzaku*. Higuchi Kazutaka has prepared a preliminary list of these prints, but further research is required for a full inventory.⁹² Such prints were probably most numerous from the early to mid-1830s, but a new wave of popularity may well have been triggered by the restrictions of the Tenpō Reforms of 1842. The suggestion that *aizuri* only began with the Tenpō Reforms is clearly in error, but Kobori Sakae argued in a 1932 article that the reform edicts did provoke a 'revival' (*fukkō*) of *aizuri* prints, an assertion that seems plausible but that still remains to be documented.⁹³

More broadly, however, in every sort of *nishiki-e* print in the remaining three decades of the Edo period after Eisen's invention, Berlin blue became undeniably the dominant colour, a trend that is clearly reflected in the large quantities of the pigment that were imported, especially after 1835 (see chart below). For the most part, it was used in combination with other colours, and in many cases, it expressed sky and water in landscapes. But it also appeared in warrior prints, actor prints, and beauty prints. Blue became what may be called the 'modal colour' of late Tokugawa popular prints.

Total Berlin Blue Imports to Japan, 1817–62

By weight in *kin* (= 600 g.), Dutch and Chinese combined



The Meanings of Blue

We may finally turn to the broader cultural significance of the 'blue revolution' in *nishiki-e* and attend to the complex meanings of the colour blue. To begin with, blue is strangely contradictory in the natural world. On the one hand, it has been called 'the rarest colour in nature', occurring only exceptionally in the colouring of plants, animals, and minerals.⁹⁴ At the same time, the vast expanses of sky and water that have served as backdrops to most human activity until modern times appear most often to our eyes as blue. So blue is both very familiar, yet somehow distant: we cannot hold the blue of sky or water in our hands. Mineral blues such as azurite and ultramarine are rare and costly, so that it is mainly through the magic of certain chemical transformations, above all the oxidation of the plant element indican to produce a blue dye, and the heating of cobalt compounds to yield a blue glaze, that we are able to bring blue directly into the objects of everyday life. Berlin blue itself was chemical magic, yielded by ingredients that themselves betrayed no hint of blue.

The most powerful function of indigo and Berlin blue in *nishiki-e* prints was thus to work the magic of bringing sky and water into the hands and homes of many ordinary Japanese. The depiction of the sky in particular was a fairly recent innovation even in the elite painting tradition of Japan. Before the mid-eighteenth century, the perceptual effect of blue skies was rarely even represented in Japanese pictorial art: the first artists to record such an effect regularly were probably Ike Taiga and Maruyama Ōkyo, in the Hōreki period (1751–64).⁹⁵ In Edo *nishiki-e*, Kobayashi Tadashi has argued that Harunobu often provided a solid blue background to represent the sky, using a dayflower colourant that has in most cases faded to a faint yellow-brown.⁹⁶ I personally feel that Harunobu's background blue was conceptual, and not an expression of the perceived blue of skies. Later designers of landscape prints, however, from Toyoharu on, certainly intended the blue as perceptual, often with the confirming addition of well-defined white clouds. Kobayashi's observation about the deterioration of dayflower is especially important, and may account for the strangely yellow colours in the sky and water of many landscape prints of the Bunka period by such artists as Hokusai, Shinsai, and Hokuju.⁹⁷

The pervasive expression of sky and water in *nishiki-e* after the 'blue revolution' of Berlin blue reflects a broad transformation in the spatial consciousness of ordinary Japanese in the later Tokugawa period. The cultural historian Nishiyama Matsunosuke has noted the emergence of a 'culture of movement' (*kōdō bunka*) in late Edo, consisting primarily of outdoor leisure activities, conducted largely for pleasure although often with an element of religious dedication.⁹⁸ This was essentially the genesis of modern tourism, and was both expressed in and promoted by *nishiki-e* depicting the 'famous sites' (*meisho*). Increasing numbers of commoners were able to travel long distances within their own country and, in the process, to contemplate the look of new places. Inevitably, their way of looking tended to echo Edo prints of places, and these visions thus became filled with blue skies, clouds, and water, which were now confirmed as objects of contemplative appreciation. Even more strongly than in woodblock prints, this new consciousness was reflected in the simple *doro-e* ('mud pictures', after the opaque pigments used) landscapes that were sold to tourists in the streets of Bakumatsu Edo, all using generous amounts of Berlin blue to express broad expanses of sky and water.⁹⁹

Beyond this heightened visual sense of the national landscape of Japan as bounded by sky and water was the spatial sense of a world beyond the shores of Japan. At least two Japanese authorities have already posited a direct link between the colour blue and a longing for things foreign. The first was Sasaki Seiichi in his pioneering article of 1985 on the use of Berlin blue in the nineteenth century, in which he provocatively argued that this bright blue excited an exotic interest in the more advanced culture of the West, and specifically a 'yearning for European science'.¹⁰⁰ Indeed, he claimed, this was true not only in Japan, but throughout Asia as the use of the pigment spread in the popular cultures of China and Southeast Asia. Then in a 1990 article, Kobayashi Tadashi took the argument further back in time, arguing for a connection between the

'blue skies' of Harunobu and a 'longing for the West' through the specific association of blue skies with Western painting.¹⁰¹

I am sceptical of Sasaki's argument for Berlin blue, for which he offers no specific evidence, and even more so of Kobayashi's application of a similar argument to Harunobu (whose blue backgrounds, as I have suggested, may not even represent the sky). I do feel, however, that this line of thinking has promise if the blue is extended to include oceans as much as skies, and the consequent sense of 'overseas' is expanded to encompass Asia as much as the West. As we have seen, Berlin blue in the Bunsei period was in certain ways linked with China rather than the West, through the term 'Chinese blue' (*tōai*) used by Tōho, through the growing Chinese domination of the trade in the pigment, and through the Chinese content of one side of Eisen's pivotal fan print. Both in the ways in which it was actually used in prints and in the associations those uses provoked, the colour blue came naturally to signify the horizon where sky meets sea, beyond the islands of Japan. Blue stood not for either China or the West in particular, but for the broader world into which the Japanese were increasingly drawn. These meanings may well have been at work in other parts of Asia as well in the nineteenth century, as Berlin blue proliferated in popular prints and paintings in countries like China, Korea, and Thailand.¹⁰²

A wholly different realm of meaning for blue in late-Edo prints was its association with the world of the spirits, particularly when used in pale tones. Silk dyed in a light indigo was the 'water-blue' of the formal robes (*mizu-kamishimo*) used to clothe the dead in Japan (or, in the case of *seppuku*, those preparing to die), and was hence commonly used in memorial portraits of actors, a genre that became increasingly common in nineteenth-century *nishiki-e*. It is from this usage in 'death prints' (*shini-e*) that Kobori Sakae characterised the colour blue as 'tranquil and sad' (*seijaku aishū*).¹⁰³ Meanwhile, in kabuki drama itself, blue was the colour of villains, supernatural creatures, and ghosts. This effect is strong in the imaginative uses of Berlin blue by Kuniyoshi, whose prints of monsters and ghosts are filled with striking uses of blue.

Berlin blue thus ushered in a distinctive new era in the history of the popular colour woodblock print in Japan, one in which both the familiar landscapes of 'famous places' and the world of legends and the supernatural combined to create a powerful medium that gave voice to popular sentiment in times that proved increasingly distressing. Just as the new blue was emerging dominant in prints in the early 1830s, a new cycle of famine and reform began and would last over a decade, to be succeeded by a rapid series of foreign crises and eventually political turmoil. Whereas the tranquil landscapes, filled with familiar customs, offered consolation and stability in an era of mounting crisis, the otherworldly prints of ghosts and warriors provided metaphors for current events.

Beyond the symbolic and expressive qualities of Berlin blue, its brightness and durability enhanced the general appeal of colour prints for a wide popular audience. Berlin blue was the leading edge of a new wave of colourfulness that swept through the *nishiki-e* print from the 1830s, itself combining with yellow (particularly orpiment, or *sekiō*) to create a strong bright green, and encouraging the use of much stronger shades of safflower red (*beni*) by printing in multiple layers to create hues that were deeper and brighter than the familiar pink.

The same general outlines of the story told here would be repeated four decades later, in the 1860s, with the import of a new generation of chemically manufactured pigments from Europe, the aniline dyes that would become such a familiar feature of early Meiji prints. Now, however, the colours were different: rather than the strong blue and green enabled by Berlin blue, the principal hues were purple and red. Although the details of this new chapter in the history of colour and culture in popular prints remain to be investigated, a similar change in popular consciousness seems clearly to have been at work, with aniline purple and red serving effectively to express the assertive new regime of 'civilisation and enlightenment'. With the Meiji Restoration, red became the modal colour of another era with other priorities: where late-Edo blue was the colour of expanding space, Meiji red was to become the colour of accelerated time.

Author's Note

Much of the material in this article appeared earlier in Japanese as 'Ukiyo-e ni okeru "buruu kakumei"', *Ukiyo-e geijutsu*, no. 128 (1998), 3–26, but substantial revisions and corrections have been made to accommodate various new findings from the intervening years. The author is grateful for encouragement and expert advice from John Carpenter, Timothy Clark, Elisabeth West FitzHugh, Matthi Forrer, Higuchi Kazutaka, Sebastian Izzard, Katsuhara Shin'ya (Tatsuhara Inuki), Matsui Hideo, Antoinette Owen, William Paden, Amy Poster, Roger Keyes, Timon Screech, Shimoyama Susumu and Noda Yasuko, and Shindō Shigeru.

1. Henry D. Smith II, 'Introduction: Hokusai and the Mountain of Immortality', in *Hokusai: One Hundred Views of Mt. Fuji* (New York: George Braziller, 1988), 7–23. This essay deals with the *One Hundred Views of Mt. Fuji* (1834ff), but the arguments about the spiritual meanings of Mt. Fuji apply equally to the earlier *Thirty-Six Views*.
2. Musei Gakujin [Asakura Musei], 'Ukiyo-e shigen', *Ukiyo-e*, no. 41 (October 1918), 4–5; part 3 of this brief miscellany is entitled 'Bero-aizuri no kigen'. *Masaki no kazura* was first printed in *Mikan zuihitsu hyakushu*, vol. 16 (Tokyo: Beisandō, 1928). The word *masaki no kazura* refers to a vine of the oleander family (also *teika kazura*, or *Trachelospermum asiaticum*), and was used in *haikai* as a season-word for autumn.
3. Edward F. Strange, 'Colour Prints by Hiroshige', *Transactions and Proceedings of the Japan Society of London*, vol. 9 (1909–11), 129–30. See note 18 for the process of extracting natural indigo from rags.
4. Kojima Usui, *Ukiyo-e to fūkeiga* (Maekawa Bun'eikaku, 1914), as reprinted in *Kojima Usui zenshū*, vol. 13 (Tokyo: Taishūkan Shoten, 1984), 247–48.
5. Ishii Kendō, *Nishiki-e no hori to suri* (Geisōdō, 1929), 70–71, and Uchida Minoru, *Hiroshige* (Tokyo: Iwanami Shoten, 1932), 386–88.
6. Yoshida Teruji, *Ukiyo-e jiten*, vol. 1 (Hokkō Shobō, 1944), 13–14; *Genshoku ukiyo-e daihyakka jiten*, 11 vols. (Tokyo: Taishūkan Shoten, 1980–82), vol. 3, 12.
7. Call number G29-715. This manuscript differs in minor ways from that used for the printed version in *Mikan zuihitsu hyakushu* (see note 2), the current whereabouts of which is unknown. For details of these differences, see the Japanese-language version of this article in *Ukiyo-e geijutsu*. No other surviving manuscript copy has been located.
8. Safflower red, depending on how it is prepared, can yield a yellowish colour, which would account for the green (*kusa*, 'grass' colour) that Tōho reports here.
9. The printed version of *Masaki no kazura* in *Mikan zuihitsu hyakushu* does not provide voice marks (*dakuten*) for 'herorin'; the Tokyo University Library manuscript provides no voice marks at all (except for some of the *furigana*), so I feel justified in suggesting that the initial syllable 'he' would most likely have been pronounced 'be'.
10. Ōoka Unpō (1765–1848) was a *bakufu* retainer and literati painter who lived in the same Yotsuya area as Tōho.
11. This remark is set off parenthetically in *warigaki* format; it seems abrupt here, but perhaps it is intended to explain why Tōho would be interested in prints.
12. Horie-chō, located northeast of Edobashi Bridge, was known for its summer fan merchants.
13. The surviving versions of *Masaki no kazura* are undated, but the latest date mentioned in the text of the *Mikan zuihitsu hyakushu* version is Ansei 2 [1855]. Mitamura Engyo in his comments on the printed version surmised that it was compiled around this time; see *Mitamura Engyo zenshū*, vol. 23 (Tokyo: Chūō Kōronsha, 1977), 306.
14. I am deeply indebted to Amy Poster, Curator of Asian Art at the Brooklyn Museum of Art, who first told me of the *aizuri* prints in the collection, and showed me the Eisen fan print.
15. A very different attitude towards the credibility of the *Masaki no kazura* account is taken by Shindō Shigeru in his commentary on the Eisen fan print in the catalogue of an exhibition of ukiyo-e from the Brooklyn Museum of Art that travelled to four Japanese cities in 1999, the first time that the print had ever been shown in Japan; see Nagata Seiji, comp., in *Burukkurin Bijutsukan ukiyo-e meihinten (Masterpieces of Ukiyo-e from the Brooklyn Museum of Art)* (Osaka: Sankei Shinbun, 1999), 104–05. Shindō claimed that *Masaki no kazura* was 'nothing more than what just one person had observed', and that reliance on it revealed 'the problem of falling under the spell of written texts'. His own counter-arguments, however, seem to have been motivated largely by a desire to prove that Kunisada (of whose actor prints Shindō is a leading specialist) rather than Eisen was both the first ukiyo-e artist to use Berlin blue, and the first to use the multi-shade *aizuri* technique. For specific problems with Shindō's arguments, see notes 44, 62, and 64 below.
16. Still a third mineral blue is ultramarine (from lapis lazuli), the most rare and costly of all pigments in early modern Europe; Japanese knew of this colour through Chinese reports, but the pigment itself has never been found in paintings in Japan, according to Kazuo Yamasaki and Yoshimichi Emoto, 'Pigments Used in Japanese Paintings from the Protohistoric Period Through the 17th Century', *Ars Orientalis*, vol. 11 (1979), 14. In 1828, synthetic ultramarine became available in Europe, and has been found on late-Edo ukiyo-e paintings; see Elisabeth West FitzHugh, 'A Pigment Census of Ukiyo-e Paintings in the Freer Gallery of Art', *Ars Orientalis*, vol. 11 (1979), 37, in which synthetic ultramarine is reported as occurring in several paintings by (or attributed to) Hiroshige II.

17. For recent research on dayflower blue, see Shiho Sasaki and Elizabeth I. Coombs, 'Dayflower Blue: Its Appearance and Lightfastness in Traditional Japanese Prints', unpublished paper, 2004. For an earlier study, see Robert L. Feller, Mary Curran, and Catherine Bailie, 'Identification of Traditional Organic Colorants Employed in Japanese Prints and Determination of Their Rates of Fading', in Roger Keyes, *Japanese Woodblock Prints: A Catalogue of the Mary A. Ainsworth Collection* (Oberlin, Ohio: Allen Memorial Museum, Oberlin College, 1984), 253–66.
18. Indigo sticks could also be prepared directly from the 'flowers' (*aibana*) that appear on the surface of indigo vats while the dye is fermenting; it remains unclear which process was the more common for the production of indigo sticks in the Edo period. The printmaker Tatsuhara Inuki (who formerly used the name Katsuhara Shin'ya) has recently succeeded in recreating the technique of extracting indigo from dyed cloth in order to make *aibō*; for a brief mention, see Tatsuhara Inuki, 'Edo nishiki-e no shikisai ni tsuite,' *Hanga Kenkyūkai kaihō* (*The Association for the Study of Prints Newsletter*), no. 13 (May 2003), 2.
19. Feller et al., 261, compares the fading rates of dayflower and indigo. While dayflower is highly fugitive, indigo is placed in the 'intermediate' category of lightfastness, with an 'intended useful lifetime' of twenty to one-hundred years.
20. Sebastian Izzard, *Kunisada's World* (New York: Japan Society, 1993), pl. 25 (p. 78).
21. The specimen used for this analysis was from the collection of Katsuhara Ryōta, and is illustrated in Baren no kai, ed., *Ukiyo-e: Edo no ishō* ten (Yokkaichi: Baren no Kai, 1992), pl. 42. For the results, see Shimoyama Susumu, Noda Yasuko, and Katsuhara Shinya, 'Hikari-faibā o mochiiru sanjigen keikō supekutoru ni yoru Nihon korai no ukiyo-e hanga ni shiyō saretā chakushokuryō no hihakai dōtei', *Bunseki Kagaku*, vol. 47, no. 2. The technique is a non-destructive method of identifying organic colourants through the use of a three-dimensional fluorescence spectrum; for a description in English, see Susumu Shimoyama and Yasuko Noda, 'Non-destructive Determination of Plant Dyestuffs Used for Ukiyo-e, Traditional Japanese Woodblock Prints, Employing a Three-Dimensional Fluorescence Spectrum Technique and Quartz Fiber Optics', *Dyes in History and Archaeology*, no. 14 (1997). The technique can provide a positive identification of either dayflower or indigo – but not of Berlin blue, which is inorganic.
22. Smith, 'Ukiyo-e ni okeru "buruu kakumei"', 5, where I wrote that the version of the triptych in fig. 3, from the National Museum of Ethnology, Leiden, was a later reprint using Berlin blue. It is now clear, however, that this is not the case, both because the Leiden specimen must date at the latest from 1823 (when Jan Cock Blomhoff brought it back from Japan), at which point there is no evidence for the use of Berlin blue in Edo *nishiki-e*, and because later visual inspection by Philip Meredith of the Far Eastern Conservation Centre in Leiden has indicated that the colours are indigo; scientific verification is pending. The author has also had occasion to inspect (although not to test scientifically) still another specimen of the same triptych in the Edward Burr Van Vleck collection of Japanese prints at the Elvehjem Museum of Art, University of Wisconsin, Madison, which reveals the characteristic graininess of indigo printing and lacks the striking hue of pure Berlin blue in medium shades. Another preliminary indicator of Berlin blue that is possible with visual inspection is the penetration of the colourant through to the back of the print, since indigo tends to remain more on the surface. Ultimately, however, only scientific tests can provide a positive identification of Berlin blue; see more on this issue in note 44 below.
23. Barbara H. Berrie, 'Prussian Blue', in Elisabeth West FitzHugh, ed., *Artists' Pigments: A Handbook of Their History and Characteristics*, vol.3. (Washington, D.C.: National Gallery of Art and New York: Oxford University Press, 1997), 191.
24. For the discovery and early history of Berlin blue, see Rosamond D. Harley, *Artists' Pigments, c. 1600–1835*, 2nd ed. (London: Butterworth Scientific, 1982), 70–71, and Sasaki Seiichi, 'Kinsei (18-seiki kōhan ikō) no Ajia ni okeru Purushian buruu no tsuiseki', *Tama Bijutsu Daigaku kenkyū kiyō*, no. 2 (1985) [reprinted in Sasaki Seiichi, *Nihon kindai bijutsu ron, I* (Tokyo: Ruri Shuppan, 1988), 147–82, for which pagination hereafter is provided in brackets], 14–15 [151–59].
25. Irita Seizō, ed., *Hiraga Gennai zenshū*, 2 vols. (Tokyo: Hagiwara Seibunkan, 1935), vol. 1, 35.
26. The text, *Gazu rikai*, is reproduced in Kumamoto Kenjirō, comp., *Zuroku Akita ranga* (Tokyo: San'ichi Shobō, 1974), 30.
27. Naruse Fujio, 'Satake Shozan no seiyō garon', in Kumamoto, comp., *Zuroku Akita ranga*, 24, says that Berlin blue was used for the shading on peonies in Akita School paintings, and Higuchi Kazutaka, 'Aizuri ukiyo-e hanga ni kansuru ichi-kōsatsu: Katsushika Hokusai no aizuri fūkeiga o megutte' (M.A. thesis, Keio University, 1993), 11–12, discusses the possible use of Berlin blue on paintings by both Shozan and Shiba Kōkan. These suggestions await scientific corroboration.
28. Sasaki, 'Kinsei no Ajia ni okeru Purushian buruu no tsuiseki', 13 [149]; this was the spelling most commonly used in Dutch trade records at the time.
29. The letter appears in 'Tsukue no chiri', a manuscript collection of letters addressed to Kimura Kenkadō, as quoted by Koishikawa, 'Ai-e shikō', 16. The letter is undated, but must be before Kenkadō's death in 1802; Kenkadō's diary mentions Tairō in 1798 and 1801, suggesting that the exchange was around those years.
30. In *Ehon saishiki-tsū*, Hokusai generally recommended the use of *bero* to provide shading, or for the pupil of a bird's eye; see Carolina Retta, 'Hokusai's Treatise on Colouring: *Ehon saishikitsū*', in Gian Carlo Calza, ed., *Hokusai Paintings: Selected Essays* (Venice: The International Hokusai Research Centre, University of Venice, 1994), 240–41.
31. For 'heru' (as well as the longer form, 'herurensu'), see Kitamura Nobuyo (Intei), *Kiyū shōran* (1830 preface, printed edition 1897, 2 vols, ed. Kondō Keizō), vol. 1, 399; for 'beru', see Ōtsuki Gentaku in 1810, as cited in Miyashita Saburō, 'Jinkō konjō (Purushian buruu) no mozō to yunyū', in Arisaka Takamichi and Asai Mitsuaki, eds., *Ronshū Nihon no yōgaku III* (Osaka: Seibundō Shuppan, 1995), 121; and

for 'peru', see Satō Chūryō, *Chūryō manroku* (1826), in *Nihon zuihitsu taisei*, ser. 3, vol. 2 (1929), 71.

32. The terms for Berlin blue used by the Chinese themselves at the time did refer to its European origin, namely *yang qing* ('Western blue') and *yang dian* ('Western indigo'); see Sasaki, 'Kinsei no Ajia ni okeru Purushian buruu no tsuiseki', 18 [169–70].

33. Berrie, 'Prussian Blue', 191–93 lists dozens of variant historical uses in English and other European languages. According to Michel Pastoureau, *Blue: The History of a Color* (Princeton University Press, 2001), 132, 'Berlin' blue' was the original name for the pigment, assigned by the chemist who discovered it, Johann Konrad Dippel, but the term 'Prussian blue' spread after the process was published in English by John Woodward in 1724.

34. The reading 'tōai' (rather than *kara-ai*) is from the *furigana* gloss in the Tokyo University Library manuscript.

35. There in fact exists a form of Berlin blue known as 'Chinese blue', described by Berrie, 'Prussian Blue', 195, as having a greenish undertone – but the connection with China is unclear.

36. Such an analysis has actually been carried out for various ukiyo-e paintings in the Freer Gallery in Washington, D.C., as reported in FitzHugh, 'A Pigment Census of Ukiyo-e Paintings', 34–37. This study indicates the presence of Prussian blue in seven eighteenth-century works (Groups 2–4), but subsequent revisions by the author, as reported in a personal communication of 16 October 1996, raise uncertainties about all of these.

37. Sasaki, 'Kinsei no Ajia ni okeru Purushian buruu no tsuiseki'.

38. Miyashita, 'Jinkō konjō no mozō to yunyū', 119–36. Note that Berlin blue was imported to Japan not through the official Dutch trade, but in the private trade ('*waki-ni*' in Japanese, '*cambang*' in Dutch) that was permitted to individual crew members. This means that it rarely appears in official trade documents. Sasaki and Miyashita, however, were able to uncover records of the licensed Japanese merchants in Nagasaki who were involved in the private trade.

39. This was an erratic era for the Dutch trade because of the British threat to Dutch shipping in Asia as an extension of the Napoleonic Wars in Europe: the Dutch trade with Japan stopped entirely in 1795–96, and was then continued in the years 1796–1803 by hiring American ships. In the period 1804–09, a mixture of Dutch and other Western ships visited Nagasaki, and from 1810–16, the entire trade was once again suspended, resuming from 1817. For details, see Shunzo Sakamaki, 'Japan and the United States, 1790–1853', *Transactions of the Asiatic Society of Japan*, 2nd ser., vol. 18 (1939), 4–11 and 174–90.

40. This story is recounted in *Ran'en tekihō*, supp. vol. 7, an unpublished manuscript of 1810 by Ōtsuki Gentaku, who translated for Chōhaku the relevant passage on Berlin blue from a Dutch version of Noel Chomel's *Dictionnaire oeconomique*; Miyashita, 120–22. In addition, there is a report that Mitsukuri Genpo (Maki Bokuchū) did a translation from the Dutch in about 1845 (Kōka 2) entitled 'Berurinsu burau seihō'; see Shinmura Izuru, 'Oranda denrai no yōga', *Shirin*, vol. 2, no. 1 (January 1917), 26

(reprinted in his *Nanban kōki*, Tokyo: Iwanami Shoten, 1925, 477). The whereabouts of this document, however, is unknown, and there remains no evidence that the Japanese ever succeeded in the manufacture of Berlin blue.

41. Satō Chūryō, *Chūryō manroku*, 71.

42. The letter from Tairō to Kenkadō thanking him for obtaining the pigment is cited by Koishikawa, 'Ai-e shikō', 16. See note 29 for the date of the letter. The price cited was almost twice the Osaka commercial retail price of the mid-1820s; see table 2 below.

43. Katsuhara Shin'ya, drawing on his experience in trying to replicate Edo *nishiki-e* colours, believes that indigo was wholly displaced by Berlin blue, which could easily mimic indigo by admixture with *sumi*, and that *aigami* continued to be used only in mixture with safflower (*beni*) to yield a distinctive purple. (Personal communication, June 1996.) More recent research by Matsui Hideo, director of the Koishikawa Ukiyo-e Museum, using datable actor prints from the Waseda Theatre Museum, suggests that the transition from indigo to Berlin blue occurred rapidly, in the course of the year 1830, and was complete by 1831; Shimoyama Suzumu, Matsui Hideo, and Shimoyama Yasuko, "Ukiyo-e hanga chakushokuryō no hi-hakai bunsekihō ni yoru purushan burū (bero-ai) dōnyū katei no kenkyū," presented at 8th International Ukiyo-e Conference of the International Ukiyo-e Association (Kokusai Ukiyo-e Kyōkai), Gakushūin University, 9 November 2003, abstracts of which appeared in the program for the conference, pp. 18–19.

44. In Smith, 'Ukiyo-e ni okeru "buruu kakumei"' (1998), 5, I continued to believe that Berlin blue must have been used in Edo *nishiki-e* before 1829, but I have since been persuaded by the ongoing research of Matsui Hideo, using datable actor prints in the Waseda Theatre Museum, that this was probably not the case, although much further research is needed to confirm this. I had earlier been influenced in the first instance by the assertions of Sebastian Izzard, in his catalogue of a 1993 Kunisada exhibition in New York (*Kunisada's World*) that Berlin blue was to be found in various of Kunisada's prints of the mid-1820s. He specifically mentioned a painting that he dated to c. 1822 (pl. 26), a *gōkan* cover of 1824 (fig. 8, p. 28), a fan print dated 1825 (fig. 10, p. 29), and a variety of prints that he dated from the years 1824–28 (pls. 36, 39, 40–42, and 44). In only three of these cases, however (pls. 26, 39, and 44), did he indicate exactly which area of the print he considered to be Berlin blue, and in every case, it was a very dark shade, which is precisely the least likely candidate for Berlin blue, which can best achieve such dark shades only with admixture with *sumi* or natural indigo. It is now clear that such judgments with the naked eye are often unreliable, and that scientific tests are required to confirm the presence of Berlin blue; see notes 21, 53, and 63 for various such tests, and Berrie, 'Prussian Blue', 205–10, for a technical discussion of still other methods. Independently of the claims by Izzard for the use of Berlin blue in Kunisada's prints before 1829, Shindō Shigeru made similar assertions around the same time, which are summarized in his commentary on the Eisen fan print cited in note 15. Shindō claimed that the earliest use

of Berlin blue in ukiyo-e was a death portrait (*shimi-e*) by Kunisada of the Kamigata actor, Arashi Rikan I (known previously as Arashi Kichisaburō II and Arashi Kitsusaburō I), who died in the ninth month of 1821; for an illustration in colour, see Shindō Shigeru, *Gototei Kunisada: Yakusha-e no sekai* (Tokyo: Gurafikku Sha, 1993), 57. The print was published in Edo, presumably shortly after the death of the celebrated actor, who is shown in the pale blue robes that are associated with death. I myself (in 'Ukiyo-e ni okeru "buruu kakumei"', 5) uncritically accepted this assertion by Shindō, but it is now clear that there is no foundation for claiming this to be Berlin blue, since such hues were easily obtained with natural indigo. Only scientific testing will prove this for sure, but in the meantime there is no reason to suspect Berlin blue in this print, nor is it clear on what basis Shindō made this claim. A much earlier example of a similar pale blue using indigo may be found on the shaved heads (*sakayaki*) in four of Sharaku's famous group of twenty-eight *ōkubi-e* actor portraits from performances in the fifth month of 1794, three of which have been shown by Gene Ferrell of the Straus Center for Conservation, Harvard University, to be indigo mixed with shell white *gofun*. (Personal communication via Roger Keyes, October 2003.) Shindō further claimed that it was possible to trace the use of Berlin blue in datable Edo actor prints of the 1820s, and that such an analysis revealed a 'rapid increase' (*kyūzō*) in the use of Berlin blue after about 1825. Like Izzard, however, he provided no scientific evidence that the colours involved were in fact Berlin blue rather than natural indigo, and I remain unpersuaded by Shindō's claims. So for the time being, the use of Berlin blue in Edo *nishiki-e* before 1829 remains purely speculative, and I am now disposed to accept as accurate the testimony of Seisōdō Tōho in *Masaki no kazura* that when he himself used the new pigment in Edo *surimono* in 1829, 'it was not yet used on *nishiki-e*'. The question of illustrations in novels, mentioned below, is a different matter.

45. Keyes proposed that a small amount of Berlin blue had been used for the hat of an Immortal (*senjin*) mounted on a crane depicted in a *surimono* by Nagayama Kōin (1765–1849), datable to New Year's 1825; see Roger Keyes, *Japanese Woodblock Prints*, 42, 91, and 185. More recently, Higuchi Kazutaka discovered a *surimono* by the same artist datable to 1822 that may have also used Berlin blue; see Higuchi Kazutaka, 'Aizuri ukiyo-e hanga ni kansuru ichi-kōsatsu—Katsushika Hokusai to Keisai Eisen no beroai-zuri fūkeiga o megutte', *Idemitsu Bijutsukan kanpō*, no. 90 (February 1994), 15, note 1; the print is from the Museum für Ostasiatische Kunst, Berlin. See photograph in Steffi Schmidt and Setsuko Kuwabara, *Surimono* (Berlin: Staatliche Museen Preussischer Kulturbesitz, 1990), 124–25.

46. The 1821 print is illustrated in Matsudaira Susumu, ed., [*Waseda Daigaku Tsubouchi hakushi kinen*] *Engeki Hakubutsukan shozō shibai-e zuroku 4: Zenki Kamigata-e*, 2 vols. (Tokyo: Waseda Daigaku Tsubouchi Hakushi Kinen Engeki Hakubutsukan, 1995), cat. 4–148, and a preliminary visual identification of the original strongly suggested Berlin blue. This identification has since been positively confirmed by Matsui Hideo using the three-dimensional fluorescence spectrum technique developed

by Shimoyama Susumu (see notes 21 and 43). Matsui's research, which awaits publication, is summarized in a report of February 2004, submitted to the Waseda University Theatre Museum, whose collection of Osaka actor prints Matsui used for his analysis.

47. Izzard, *Kunisada's World*, 29. Here, however, Izzard was referring to the use of Berlin blue in Edo, whereas my own argument that follows is that this better describes the situation in Osaka.

48. Satō Chūryō, *Chūryō manroku* (1826), from *Nihon zuihitsu taisei*, ser. 3, vol. 2 (1929), 75. Sasaki Seiichi had taken note of this passage in 'Edo no doroe: Sono 'aozora' no seiritsu ni tsuite', *Mizue*, no. 864 (March 1977), 59 (reprinted in *Nihon kindai bijutsu ron*, I, 141), but had argued from the evidence of *Masaki no kazura* that Berlin blue could not possibly have been so difficult for Edo artists to obtain at the time. Sasaki wrote this, however, before his discovery of the sudden transformation of the Berlin blue trade just at the time that Chūryō was writing.

49. An alternate term for *aizuri* widely used in the modern literature on ukiyo-e is '*ai-e*', which appears as an entry in both Yoshida Teruji's *Ukiyo-e jiten* and in the *Genshoku ukiyo-e daihyakka jiten*. '*Ai-e*', however, appears nowhere in Edo-period documents, and, according to Urushiyama Tendō, was probably first introduced by Iijima Hanjūrō (Kyoshin) in his *Nihon-e ruikō* (10 vols., manuscript, 1900); see Urushiyama Tendō, *Ihon Nihon-e ruikō* (4 vols; Tokyo: Geien Sōsho, 1920), vol. 1, 31–34. Most later writers have perpetuated the term '*ai-e*', although Urushiyama himself used '*aizuri-e*', adding '*-e*' to *aizuri*; this likewise appears nowhere in Edo texts, and is probably Urushiyama's own coinage.

50. The bluish qualities of black are implicit in the use of *aozumi* ('blue *sumi*') to refer to ordinary *sumi* and in the term *seitai* (or *taisei*) to refer to the colour of eyebrows, which may have involved the use of indigo in cosmetics. It is said that in China and among Japanese *bunjinga* painters, indigo was also sometimes mixed with ink to produce a 'blue-black' (*seiboku*) colour – not unlike the use of Berlin blue in modern times as an additive to newspaper ink to improve legibility. It was also reported in 1830 in *Kiyū shōran* that calligraphy copybooks in the 'rubbing' style (*ishizuri*, in which white characters appear on a dark ground) printed in Berlin blue had recently been imported from China. See Kitamura Nobuyo, *Kiyū shōran* (original preface, 1830; printed 1897, Kondō Keizō, ed., 2 vols; reprint edition, Tokyo: Meicho kankōkai, 1979), vol. I, 399. No such copybooks have been discovered, nor are they mentioned in any other source.

51. Yoshida Teruji, *Ukiyo-e jiten*, vol. 1 (Tokyo: Hokkō Shobō, 1944), 13, under '*ai-e*'. This report is repeated in Koishikawa Shōji, '*Ai-e shikō*', *Sansai*, no. 10 (August 1947), 15.

52. The original work was a handwritten book by Yūjō (1723–73), the abbot of Enman'in and patron of Maruyama Ōkyo, with poems by Kyoto aristocrats; it was then copied by the artist Kanō Eiryō (1739–69) for the printed *aizuri* version. This book was noted by Miyatake Gaiokotsu, '*Aizuri-bon*', *Konohana*, no. 13 (January 1913), 10. It is discussed by Higuchi, '*Aizuri ukiyo-e hanga ni kansuru*

ichi-kōsatsu' (1994), 6. Higuchi also notes the use of indigo for the key-block of Kitao Masayoshi's *e-hankiri* work 'Edo meisho zue', which also included other light colours.

53. In *Arima rokkei*, the preface and afterword (seven and three folios in length, respectively) are printed in black *sumi*, and the seven folios for the poems and paintings in indigo blue. As a preliminary means of identifying the blue pigment, I have first assumed that indigo and Berlin blue are the only two possible colourants for *aizuri* printing. (The technique is obviously problematic if the two pigments are mixed, as seems occasionally to have been the case.) To distinguish between indigo and Berlin blue, the original work was photographed with infrared film, using a red filter, against standard samples in comparable shades of the two pigments in question, obtained from Katsuhara Shin'ya and printed by William Paden. In the infrared spectrum, indigo is far more reflective than Berlin blue and appears as light gray rather than black. (The only other blue pigment that behaves in this way is smalt, which is assumed to be an unlikely possibility.) The same procedure was used to determine indigo versus Berlin blue in three other prints reported below: Eisen's *aizuri* illustrations in *Nokinarabi musume hachijō* and *Kuruwa zōdan* were determined to be Berlin blue, and the Inoue Kyūkō etching to be indigo. It should be stressed that this procedure is a rudimentary diagnostic tool, and cannot substitute for more refined scientific techniques of pigment analysis that remain to be conducted on these works. Another simple nondestructive method for detecting Berlin blue has been proposed in Rochelle Wexler Bickford, 'Identification of Prussian blue', *Andon*, no. 34 (1989), 61–62, in which it is claimed that Berlin blue will fluoresce under ultraviolet light; it proved impossible, however, to replicate these results in the conservation laboratory of the Brooklyn Museum of Art. There seems to be no scientific reason to believe that such a test would work; if anything, fluorescence in the ultraviolet spectrum would more likely indicate an organic colourant like indigo, rather than Berlin blue.

54. Matsuki Hiroshi, 'Hokusai no tagenteki sekai', *Meihō Nihon no bijutsu*, vol. 23, *Hokusai, Hiroshige* (Tokyo: Shōgakukan, 1983), 145. I am indebted to Higuchi, 'Aizuri ukiyo-e hanga ni kansuru ichi-kōsatsu', 7, for this reference.

55. Matsuki, *ibid.* The evidence he cites is a letter to Takizawa Bakin by Eisen, accompanying a copperplate design that he had received from Naka; for the letter, see Mori Senzō, 'Chosakudō o toburau hitobito: Kyokutei Bakin no jinmeibo', *Kokugakuin zasshi*, vol. 40, no. 1 (January 1934), 74.

56. The presence of Berlin blue was ascertained for these works by the technique described in note 53.

57. The author of the novel was Nansenshō Somabito II, who would later gain fame under the name Tamenaga Shunsui. The entire blue-printed preface consists of three to five folios for each of the four volumes; the total number of images by Eisen comes to ten. The existence of these early *aizuri* prefaces by Eisen was first noted in Kobori Sakae, 'Tenpō kaikaku to nishiki-e', *Ukiyo-e geijutsu*, no. 5 (1932), 43.

58. The author of *Kuruwa zōdan* was Bisanjin (Tōri Sanjin). A sequel to this work, *Hokuri tsū* (2 vols.), published two years later in 1828, also has *aizuri* prefaces with illustrations by Eisen's student, Keisai Senju, although it is not yet been possible to test for the use of Berlin blue in this case.

59. Matsui Hideo of the Koishikawa Ukiyo-e Museum has told me in personal conversation that he has seen a *sumizuri* (black-printed) edition of the work *Hokuri tsū* mentioned in the previous note, although he could not recall where.

60. Iwasaki Hitoshi, 'Yukata zakkō: Sono naritachi to gihō, ishō', in Nagasaki Iwao, *Chōnin no fukushoku*, *Nihon no Bijutsu* (Shibundō), no. 341 (October 1994), 90–98.

61. See Inge Klompmakers, *Of Brigands and Bravery: Kuniyoshi's Heroes of the Suikoden* (Leiden: Hotei Publishing, 1998), and Takahiro Kitamura, *Tattoos of the Floating World: Ukiyo-e Motifs in the Japanese Tattoo* (Amsterdam: Hotei Publishing, 2003).

62. From *Mumei-ō zuihitsu* (1833), also known as *Zoku Ukiyo-e ruikō*; see Yura Tetsuji, *Sōkō Nihon ukiyo-e ruikō* (Tokyo: Gabundō, 1979), 214. In his commentary on the Eisen fan print (see note 15), Shindō Shigeru claimed that in fact Kunisada, not Eisen, was the originator of the multi-shade *aizuri* technique. His argument is based on the fact that certain of Kunisada's courtesan prints of the early 1820s were later reprinted in this technique. He offers no evidence, however, for believing that these were reprinted before rather than after 1829. I find it impossible to believe that if Kunisada had in fact himself invented such a new technique, he would have used it only for older designs. Nor would this explain the sudden fad for the technique after 1830 that Tōho's account describes.

63. The test results were reported in a letter to the author from Antoinette Owen, Conservator of Paper at the Brooklyn Museum of Art, dated 30 March 1994. The test, as described in Berrie, 'Prussian Blue', 205, involved the application of sodium hydroxide, which causes the loss of blue colouration in the case of Berlin blue.

64. Shindō Shigeru has proposed in his commentary on this print (see note 15) that perhaps it was first published in 1829 as the censor's deal indicates, presumably in an ordinary array of colours, and then reprinted from the same blocks one year later as an *aizuri* print. This hypothesis really makes no sense, however, both because a radical experiment of this sort would surely demand an original design, and also because the Brooklyn print is clearly an early impression, not a reprint. In addition, as I argue below, the content of the print was likely inspired by the blue-and-white porcelain designs, and would not make sense in conventional colours.

65. One Japanese scholar claims to have once seen the 'back' side of the fan print that is said to have depicted the Sumida River, but he gives no indication of where it might be now; see Osawa Makoto, *Keisai Eisen ten: Boisugo 150-nen kinen* (Tokyo: Ōta Kinen Bijutsukan, 1997), 97. A sense of what the missing side might have looked like is provided by an untitled singlesheet *ōban* 'landscape in *aizuri* by Eisen, a riverside snow scene suggestive of the Sumida River; see Elvehjem Museum

of Art, *The Edward Burr Van Vleck Collection of Japanese Prints* (Madison: Elvehjem Museum of Art, University of Wisconsin, 1990), 9, cat. 1980.0645.

66. Yura, *Sōkō Nihon ukiyo-e ruikō*, 212, from the 1844 revisions by Saitō Gesshin.

67. Kojima Usui, 'Keisai Eisen den kōchū (dai-san kō)', *Ukiyo-e shi*, no. 12 (December 1929), 3, reprinted in *Edo makki no ukiyo-e* (Tokyo: Azusa Shobō, 1931), 182. The assertion was repeated by Uchida Minoru, *Hiroshige* (Tokyo: Iwanami Shoten, 1930; rev. ed., 1932), 386.

68. Ogi Ichirō, Yokokume Hitoshi, and Aoki Katsumi, *Shida-gama no sometsuke-zara – Edo kō-makki no sakufū o miru* (Tokyo: Ribun Shuppan, 1993), 95–9, 102–03, 121. It should be noted, however, that not all 'sansui' designs were recognizably 'Chinese', many being executed in a more Japanese manner.

69. These two *kakemono-e* are illustrated in colour in *Ukiyo-e taika shūsei* (Tokyo: Taihōkaku, 1931–33), vol. 16, figs. 16 and 17, under the titles *Gekka ryōjin* (*Travellers Beneath the Moon*) and *Setchū sansui* (*Landscape in Snow*). It is reported that the latter also exists in an *aizuri* version: Ōsawa Makoto, *Keisai Eisen* (Tokyo: Ikugeisha, 1976), 385.

70. The Sadahide print was introduced in connection with the issue of Berlin blue as 'Gountei Sadahide-ga "Dōbanfū aizuri uchiwa-e"', *Ukiyo-e geijutsu*, no. 105 (July 1992), frontispiece and page 42.

71. Edmond de Goncourt, *Hokousai* (Paris: Bibliothèque Charpentier, 1896), 164; see also Matthi Forrer, *Hokusai* (New York: Rizzoli International Publications, 1988), 264.

72. In particular, Sasaki Seiichi was misled in his study of Berlin blue, 'Kinsei no Ajia ni okeru Purushian buruu no tsuiseki', 16 [162], an error that led him to conclude that the *aizuri* prints came late in the series. The persistence of Goncourt's dating is also noted by Richard Lane, 'On the Dating of Hokusai's Fuji', *Andon*, no. 23 (1986), 59–60. Lane's article, which is repeated with minor changes in his *Hokusai: Life and Work* (New York: E. P. Dutton, 1989), 184–86, pretends to offer new sources and hypotheses about the dating of the *Thirty-Six Views*, but is in fact little more than a misunderstanding of the scholarship of Suzuki Jūzō cited below.

73. Kojima Usui, 'Fugaku sanjūrokkei no seisaku mondai', *Ukiyo-e shi*, no. 24 (January 1931), 27–31, reprinted in *Edo makki no ukiyo-e* (Tokyo: Azusa Shobō, 1931), 58–64. Kojima's elaborate argument relies entirely on evidence that the *Fuji* series could have been begun as early as 1823, because of an advertisement in Hokusai's book *Imayō kushi kiseru hiinagata* (*Fashionable Patterns for Combs and Pipes*, 1823) for a forthcoming 'Fugaku hattai' (*Eight Forms of Fuji*), although no such work ever appeared; none of Kojima's points serves to demonstrate that the series did in fact begin then.

74. Kojima, 63. For a description of the *Shōhon jitate* series, see Andrew Markus, *The Willow in Autumn: Ryūtei Tanehiko, 1783–1842* (Cambridge, MA: Harvard University Press, 1992), 72–79.

75. A further problem is that Kojima misread the order of the text of the advertisement, since he mistakenly included the phrase 'ichimai ni ikkei zutsu oioi shuppan' within the

main text, following the phrase 'oioi chōkoku', whereas it is clearly part of the heading. For the correct order, see the article by Suzuki Jūzō cited in the following note.

76. Suzuki Jūzō, 'Fugaku sanjūrokkei shiken', which appeared as a commentary for a set of photographic reproductions of the series, *Katsushika Hokusai hitsu Fugaku sanjūrokkei* (Tokyo: Shūeisha, 1965); it was reprinted in Suzuki Jūzō, *Ehon to ukiyo-e* (Tokyo: Bijutsu Shuppansha, 1979), 293–301; citations here are from the latter reprint.

77. Suzuki, 296. The advertisement was repeated exactly in 1832, and with additional lines for other publications in 1833, 1834, and 1835.

78. Good specimens of the *aizuri* states of these ten prints may be found in colour reproduction in the following three works: 1) Matthi Forrer, *Hokusai: Prints and Drawings* (Munich: Prestel-Verlag and London: Royal Academy of Arts, 1991): 'Kōshū Kajikazawa', pl. 16 (Metropolitan Museum of Art, New York); 'Shinshū Suwako', pl. 17 (Brooklyn Museum of Art); 'Sōshū Shichirigahama', pl. 18 (Chester Beatty Library, Dublin); 'Jōshū Ushibori', pl. 19 (Mann Collection); 'Kōshū Mishimagoe', pl. 20 (Peter Morse Collection); 'Sunshū Ejiri', pl. 21 (Musée Guimet, Paris); 2) Nagata Seiji, ed., *Hokusai bijutsukan*, vol. 2: Fūkeiga (Shūeisha, 1990): 'Sōshū Umezawa no hidari', pl. 36; 'Tōtomi Sanchū', pl. 69 (Peter Morse Collection); and 3) Zauhō Kankōkai, ed., *Fugaku sanjūrokkei*, *Ukiyo-e taikai*, vol. 13 (Tokyo: Shūeisha, 1975): 'Buyō Tsukudajima', pl. 12; 'Tōto Asakusa Honganji', pl. 11.

79. Kobayashi Tadashi, 'Sōsetsu Fugaku sanjūrokkei', in *Fugaku sanjūrokkei*, *Ukiyo-e taikai*, vol. 13 (Tokyo: Shūeisha, 1976), 61–62.

80. The two most authoritative recent writers on Hokusai in English, for example, have tended to accept the Shūeisha *Ukiyo-e taikai* order as implicitly chronological. Matthi Forrer clearly understood the order in this way, as reflected in his dating of the individual prints in the exhibition catalogue, *Hokusai: Prints and Drawings*, nos. 11–38. A couple of years earlier, Richard Lane had been a bit more circumspect in *Hokusai: Life and Work* (New York: E. P. Dutton, 1989), 288, where he writes that he followed the *Ukiyoe taikai* order 'for convenience of reference', but on page 185 he makes it clear that he 'follows this tentative scheme' of dating. In Japanese, Nagata Seiji, *Katsushika Hokusai nenpu* (Tokyo: Sansai Shinsha, 1985), 175–77, sticks to a geographical order.

81. Kobayashi Tadashi, 'Katsushika Hokusai no Fugaku sanjūrokkei', in *Katsushika Hokusai ten*, exhibition catalogue, Itabashi Kuritsu Bijutsukan (22 November–21 December 1980), 94–96. Kano Hiroyuki, *Katsushika Hokusaihitsu Gaifū kaisei: 'Aka Fuji' no fōkuroa* (Tokyo: Heibonsha, 1994), 77, clearly supports this viewpoint in his assertion that these ten *aizuri* prints 'adorn the opening' (*hekitō o kazaru*) of this series.

82. Asano Shūgō, *Nishiki-e o yomu* (Tokyo: Yamakawa Shuppansha, 2002), ch. 4, 'Meisho-e o yomu', 70–103.

83. *Ibid.*, 78.

84. I am grateful to Roger Keyes for pointing out that Hokusai used the name 'Zen Hokusai *litsu*' in *surimono*

as early as 1825; see for example 'Daikoku lifting a rice bale' in Roger Keyes, *Surimono: Privately Published Japanese Prints in the Spencer Museum of Art* (Tokyo: Kodansha International, 1984), cat. 117, pl. 30.

85. Kano, 7677, claims that there exist 'pure' *aizuri* states of 'Asakusa Honganji', 'Umezawa hidari', and 'Tōtomi sanchū', but I have yet to see any such examples. If so, this weakens but does not completely invalidate my hypothesis of two groups of five each.

86. No decisive evidence for dating the end of the series has been found, and all of the following proposed dates are speculative: Goncourt, 164: 1829; Kojima, 64: 1831; Lane, *Hokusai: Life and Work*, 185: 1832; Kobayashi, 'Katsushika Hokusai no Fugaku sanjūrokkei', 96: 1833; Asano, *Nishiki-e o yomu*, 76: 1834; Forrer, *Hokusai: Prints and Drawings*, 37: 1835. I am most persuaded by the argument of Lane, Kobayashi, and Asano that the series was probably completed before Hokusai set to work on the book *Fugaku hyakkei* (*One Hundred Views of Mt. Fuji*), of which the first volume was published in the third month of 1834.

87. Suzuki, 'Fugaku sanjūrokkei shiken', 299.

88. Kuniyoshi's series *Sankai meisai-zukushi*, for example, could have come earlier, although only the landscape backgrounds use the *aizuri* technique. See Suzuki Jūzō, *Kuniyoshi* (Tokyo: Heibonsha, 1993), pls. 51–56; Suzuki dates this series to 'Bunsei makki'.

89. The situation is actually more complicated, as revealed by the recent discovery by Shimoyama Susumu and Matsui Hideo that the key-block on many of the prints in the *Thirty-Six Views* was printed not in Berlin blue, but in indigo. Matsui was led to suspect indigo because a key-block proof sheet (*kyōgōzuri*) in his own collection of one of the prints in the series, 'Koishikawa yuki no ashita' (*Morning after Snow at Koishikawa*) seemed suspiciously pale in colouring, and scientific tests proved it to be natural indigo. Shimoyama has shown that all of the 'front' thirty-six prints in the series use an indigo key-block, although the reasons for its use remain unclear. For an illustration of the proof sheet, see Suzuki Jūzō, ed., *Ippin ni miru ukiyo-e 250-nen: Matsui korekushon* (Koishikawa Ukiyo-e Bijutsukan and Nihon Keizai Shinbunsha, 1998), fig. 97. Matsui's finding was reported in Shimoyama, Matsui, and Shimoyama, "Ukiyo-e hanga chakushokuryō ni yoru purushan burū (bero-ai) dōnyū katei no kenkyū" and in "Ni-shurui no ao tsukaiwake," *Yomiuri shinbun* (evening ed.), 12 November 2003.

90. The work is a *ninjōbon* by Tamenaga Shunsui, *Shunshoku tatsumi no sono*, 4 vols., 1833–35. As with earlier Eisen *aizuri* in books, only the introductions are printed in blue. A copy may be found in the Tokyo Metropolitan Central Library, Tōkyō shiryō, call no. 477–10.

91. This work, the first volume of *Sono ura ume masago no shiranami*, from the Keiō University Library, is introduced in Higuchi, 'Aizuri ukiyo-e hanga ni kansuru ichi-kōsatsu' (1994), 10 and colour pl. 1.

92. Higuchi, *ibid.*, 17–20.

93. According to 'Ukiyo-e ruisan, sono shichi: Ai-e', *Konohana*, no. 7 (July 1910), 13, the first to assert that *aizuri* began with the Tenpō Reforms was Iijima Kyoshin in 1900 in *Nihon-e ruikō*, under the entry 'ai-e'. Asakura

Musei in his 1918 'Ukiyo-e shigen' (see note 2) claimed that the evidence of *Masaki no kazura* 'destroyed this baseless theory held until now' (*jūrai no mōsetsu o daha suru*), but Kobori Sakae, 'Tenpō kaikaku to nishiki-e', *Ukiyo-e geijutsu*, no. 5 (1932), 44, while admitting the previous Bunsei boom in *aizuri*, claimed nevertheless a Tenpō revival. It remains unclear exactly why the Tenpō edicts, which did no more than limit *nishiki-e* to seven or eight colours, would have provoked *aizuri*, except perhaps as a kind of ironic response to the colour restrictions.

94. Alexander Theroux, *The Primary Colors* (New York: Henry Holt, 1994), 1. This essay by Theroux is a wonderful compendium of the complex and often contradictory meanings of blue throughout human history.

95. The earliest surviving Taiga painting with a blue sky appears to be *Asama-san shinkei zu* (*True View of Mount Asama*): see Naruse Fujio, 'Ike Taiga Asama-take shinkei-zu ni tsuite', *Yamato bunka*, no. 65 (October 1979), 21–33, and 'Ike Taiga Asama-take shinkei-zu ni tsuite (Hoi)', *Yamato bunka*, no. 66 (March 1980), 59–70. See also Melinda Takeuchi, *Taiga's True Views: The Language of Landscape Painting in Eighteenth-Century Japan* (Stanford, CA: Stanford University Press, 1992), 40–47. Blue skies appear in various of Ōkyō's *megane-e* paintings and hand-coloured prints of the Hōreki-Meiwa period.

96. Kobayashi Tadashi, 'Aoi sora – Suzuki Harunobu to sono shūhen', in Akiyama Terukazu hakushi koki kinen ronbunshū kankōkai, ed., *Akiyama Terukazu hakushi koki kinen bijutsushi ronbunshū* (Kyoto: Benridō, 1991), 465–77. An illustrated version of the same article appears as 'Aoi sora – Harunobu to sono shūhen', in Nakamura Shin'ichirō, et al., *Harunobu – Bijinga to enpon* (Tokyo: Shinchōsha, 1992), 66–74.

97. As one example, see the group of eight Hokuju prints in the Musée Guimet in Paris, illustrated in *Hizō ukiyo-e taikan*, vol. 7 (Tokyo: Kōdansha, 1990), pls. 135–42. Unfortunately, it is difficult to prove scientifically the existence of dayflower blue once the colour has disappeared.

98. Nishiyama Matsunosuke, 'Edo chōnin sōron', in Nishiyama Matsunosuke, ed., *Edo chōnin no kenkyū*, vol. 1 (Tokyo: Yoshikawa Kōbunkan, 1972), 33–38. See also my discussion of this issue in the art of Hiroshige, in 'Hiroshige in History', in Matthi Forrer, ed., *Hiroshige: Prints and Drawings* (London: Royal Academy of Art, and Munich and New York: Prestel, 1997), 38–40.

99. Sasaki Seiichi's interest in Berlin blue was particularly focused on dorō-e paintings; see Sasaki Seiichi, 'Edo no dorō-e – Sono 'aozora' no seiritsu ni tsuite', *Mizue*, no. 864 (March 1977), 48–61, reprinted in Sasaki, *Nihon kindai bijutsu ron*, I, 129–46.

100. 'Yōroppa kagaku no taikai sono mono ni mukerareta dōkei'; Sasaki, 'Kinsei no Ajia ni okeru Purushian buruu no tsuiseki', 13 [149–50].

101. Kobayashi, 'Aoi sora – Harunobu to sono shūhen'.

102. Sasaki, 'Kinsei no Ajia ni okeru Purushian buruu no tsuiseki', 13 [149].

103. Kobori, 'Tenpō kaikaku to nishiki-e', 44. For a good example of the use of pale blue death robes, see the 1821 death portrait of Arashi Rikan (Kitsusaburō) mentioned in note 44.