

So Tasteful: A Note About Iron-Gall Ink

ABSTRACT

Iron-gall ink was not used for writing in historical Japan, but the compound did have a long tradition for aesthetically blackening teeth. This note summarizes the history of the practice and the materials, implements, and methods used.

INTRODUCTION

Although iron-gall ink was not used for writing or drawing in historical Japan, where black and gray shades were made with lamp black pigments (usually produced from burnt pine wood or rapeseed oil), the ink was used for another purpose—blackening teeth. This cosmetic practice extends back many centuries in several East Asian countries, including Vietnam, Indonesia, and possibly China (Casal 1966).¹ Its earliest history in Japan is unknown: whether the practice was imported and, if so, where from; when the custom was first observed; and the original reason(s) for undertaking it. Eventually a darkened mouth—which might also be interpreted as the absence of obvious teeth—came to be seen as aesthetically pleasing. In Japan, the custom was called by several names, most commonly *ohaguro* (*o* = esteemed, *ha* = teeth, *guro* = black).²

HISTORY OF USE

Whether social hierarchy dictated ancient blacking practice seems to be unknown, but in early historical periods the custom was restricted to men, women, and children of the court. Like any cultural practice or fashion, blackening teeth waxed and waned with prevailing social forces. In the Nara period (710–784), Chinese culture dominated the Japanese court, so men abandoned what came to be

seen as a barbaric taste. Women, or at least those who were married, maintained the practice.

With the overweening refinement of the Heian court, around the ninth century the style again became voguish with ladies, and girls were initiated after puberty. Some male courtiers also resumed the practice, and by the twelfth century the custom was again widespread with men at court (Casal 1966; Kojima and Crane 1991, 253; Chamberlain 1980, 63–4). Boys also blacked their teeth after puberty.

After the majority of noble men and women resumed blacking, the convention was adopted by many of the samurai class—men, women, and children who had reached puberty. Samurai men took as much care to refresh the blackening in preparation for battle as before social events. During the Heian wars (1180–1185), the Heike/Taira faction, who had adopted Kyoto court fashions, could be identified by their darkened teeth, while the Minamoto/Genji partisans kept theirs white. Casal aptly summarized the tradition's early history: “. . . what probably began as a totem superstition, after passing through a stage of perverse sensuality, turned into an emblem of a warrior's true and faithful spirit!”

Because the Taira won the wars, they dictated taste in the Muromachi period (1336–1568). The fashion spread to other classes, even commoners, although outcasts such as leather workers, beggars, and others deemed “dirty” or socially unacceptable were not allowed to use any make-up. Young people continued to follow the custom after puberty. During the fourteenth century, the Noh drama developed, and by 1349 its actors were blackening their teeth as part of their theatrical dress (Frédéric 1984, 222). Their carved and painted masks, which continue to be highly valued as art objects, often show darkened teeth.

In the Momoyama period (1568–1603), Bernardino de Avila Girón, a Spanish merchant who settled in Japan, wrote that “. . . maidens and widows do not stain their teeth in this way” (Schilling and de Lejarza 1934, 17–18; quoted in Cooper 1965, 39, 48).

Received for publication Fall 2003.

However, later accounts reported that in certain regions young men had girls' teeth forcibly blackened as a way of committing them to marriage (Curizuka 1904; Mossman 1873, 477), and during the Edo period (1603–1868) *ohaguro* was an important part of the rites that transformed apprentice courtesans into women at about age fourteen. To assure their professional success, the initial staining materials were collected from friends and applied at a ceremony sponsored by friendly "iron parents" (*kane oya*) (Casal 1966, 25). Edo women were required to blacken their teeth after they married, the practice having come to signify marital fidelity. Casal speculates that this new meaning may have derived from the earlier fidelity of warriors to their lords. Widows, no matter how young, were expected to maintain the practice as a sign of undying loyalty to their late husbands. Edo men observed the custom from the age of fifteen or sixteen.

After Commodore Matthew Perry's expedition forced Japan to reopen intercourse with the world in 1853, the nation became aware of foreign technological advancements and grew anxious about related cultural discrepancies. At the beginning of the Meiji Restoration, an imperial decree on January 30, 1868, announced that nobles were no longer "obliged" to blacken their teeth. This indicates not only that the government was sensitive to Western aesthetics, but that at some previous time the custom had mutated to a requirement for those at court. Despite the edict, the Emperor maintained the tradition for a while. Then in the spring of 1870 another decree was issued: men were forbidden from blacking their teeth. In March 1873 the Empress let it be known that she had discontinued the practice, sending a signal that ladies of the court quickly followed. The change flowed down through society, although some women in remote rural areas continued the practice for nearly a century.

STAINING MATERIALS AND METHODS

Early blacking methods are not known; since the procedure was traditional, the method documented during the Edo period probably was similar to earlier techniques. "Mr. A. B. Mitford, in his amusing *Tales of Old Japan*, gives the following recipe for tooth-blackening, as having been supplied to him by a fashionable Yedo [Tokyo] druggist: 'Take three pints of water, and, having warmed it, add half a teacupful of wine. [By "wine," he must of course mean Japanese *sake*.] Put into this mixture a quantity of red-hot iron; allow it to stand for five or six days, when there will be a scum on the top of the mixture, which should then be poured into a small teacup and placed near a fire. When it is warm, powdered gall-nuts and iron filings should be added to it, and the whole should be warmed again. The liquid is then painted on to the teeth by means of a soft feather brush, with more powdered gall-nuts and iron, and,

after several applications, the desired colour will be obtained'" (Chamberlain 1980 quoting Mitford 1904). *Ukiyoe* prints often depict women brushing on the concoction.

Some modern references describe the dye as being made from oxidized iron shavings soaked in vinegar and powdered gallnuts (Kojima and Crane 1991; Salmon 1975, 18), perhaps reflecting the observation of Luis Frois, a sixteenth-century Portuguese missionary, who remarked, "European women use artificial means to make their teeth white; Japanese women use iron and vinegar to make their mouth and teeth black" (Frois chap. 2, no. 16; quoted in Cooper 1965, 39, 48, 420). Several modern writers say that tea was used (Shimizu 1988, 380; Pekarik 2003). Avila Girón reported that "the bark of a tree" was used [to provide tannic acid] (Cooper 1965, 39), and Casal said that the snake gourd (*Luffa petola*, called *hechima* in Japanese) was used. Thus, it seems that as with Western iron-gall inks, a variety of ingredients were used to intensify the acidity of a recipe. Because the Japanese colorant was used orally, one would not expect the water-soluble gum binder, provisional colorants, or gloss enhancers that were incorporated into Western iron-gall inks to have been added; but one source says "things such as candy were also added" to the iron, water, and tea or vinegar mixture (Pekarik 2003).³

During the tenth and eleventh centuries, it became stylish to store cosmetics and toilet implements in sets of nesting lacquer boxes, which upper class women took to their husbands' households as part of their dowries. The often elaborately decorated sets sometimes contained more than fifty pieces altogether and remained popular through the Edo period; examples can be seen in the lacquer collections of fine arts museums (Montreal Museum of Fine Arts 1989, 203–4; Shimizu 1988, 292–295). Among other accoutrements, the boxes held polished metal hand mirrors, feather and hair brushes, water ewers for mixing powders into pastes, basins for rinsing the mouth between ink applications, and thin papers for removing make-up. In addition to white face powders (e.g. white lead and chalk, pulverized rice), the boxes held black powders: lamp black for eyebrows (Casal 1966, 16; Frédéric 1984, 84; Salmon 1975), powdered gallnuts—called *fushi* or *fushiko* [五倍子粉] (Montreal Museum of Fine Arts 1989)—for teeth, and possibly a powder of fully formed, desiccated stain.⁴

Less wealthy people probably stored their powders and liquids in a variety of containers. Kilns in Echizen province (now Fukui prefecture) were famous for rough, functional stoneware jars made especially for tooth blackening materials ("Major ceramic kilns of Japan," [2003]), and humble brushes included reed or willow wood sticks fibrillated at one end (Casal 1966, 24).

The first time teeth were blackened, two or three days of applications were required to create a desirably dark shade

(Casal 1966, 24). Even after establishing the color, the preparation wore off after a few days, and Avila Girón opined that one function of women's red lip color was "to hide the dye which comes off on their lips when they stain their teeth" (quoted in Cooper 1965, 40). Before restaining, it was recommended that most of the residual color be rubbed off using finely powdered charcoal or red cuttlefish bones and a fibrillated stick brush (Casal 1966, 24).

IN CONCLUSION

Of course there are always those who rebel against social custom. A famous Heian story describes a young girl who ". . . thought that people's artificial manners were hateful. . . . She declared that teeth-blackening was . . . harmful and dirty . . . and her smile displayed astonishingly white teeth. . . . People were scared and ill at ease before her and shunned her [and another lady of the household said of her]: '. . . her teeth [look] as naked as a skinned animal. . . .' "5

ACKNOWLEDGMENTS

I am grateful to Andrew Pekarik, a scholar of Japanese literature and visual arts, for translation assistance and to Colleen Hennessey, archivist at the Freer-Sackler Galleries of the Smithsonian Institution, for access to library materials.

NOTES

1. Casal's "Japanese Cosmetics and Teeth Blackening" is a fascinating article by a Swiss businessman, lacquer collector, and highly regarded scholar of traditional Japanese culture. Casal wrote that teeth blackening was not practiced in China, where "beautiful teeth should be like pearls of the purest color." However other sources say the practice was observed in parts of the country. See, for example, Qionchua 2001 and Machar 1882.

2. Casal also listed the names *tesshoo* (iron-juice) and *dashigane* (metal extract), noting that commoners called the preparation *okane* (the noble metal) as well as *ohaguro*.

3. Shimizu states that both vinegar and tea were used.

4. This author's speculation, based on the assumptions that a powder of the fully constituted stain would have been useful when traveling and that specific preparation methods varied in Japan as much as they did in the West.

5. "The princess who loved insects," from the collection of ten anonymous stories called *Tsutsumi chuunagon monogatari*, which might translate as "Riverside counselor stories." As translated in E. O. Reischauer and J. K. Yamagiwa, 1951.

REFERENCES

- Casal, U. A. 1966. Japanese cosmetics and teeth blackening. *Transactions of the Asiatic Society of Japan*, 3rd ser., 9: 5–27.
- Chamberlain, B. H. 1980. *Japanese things: Being notes on various subjects connected with Japan*. Rutland, Vt.: Tuttle. (Originally published in 1905 under the title *Things Japanese*.)
- Cooper, M., ed. 1965. *They came to Japan: An anthology of European reports on Japan, 1543–1640*. Berkeley, Ca.: University of California Press.
- Curizuka, Mrs. R. 1904. *Japanese wedding ceremonies old and new*. Tokyo.
- Frédéric, L. 1984. *Daily life in Japan at the time of the samurai*. Trans. E. M. Lowe. Rutland, VT: Tuttle.
- Frois, Luis. 1585. *Tradoto em que se contem muito sustinta- e abreviadamente algumas contradicoes e diferencas de costumes*. Quoted in Cooper 1965, 39, 48, 420.
- Kojima, S., and G. Crane. 1991. *Dictionary of Japanese culture*. Union City, Ca.: Heian International.
- Machar, A. M. 1882. An apostolic missionary in China. *The Southern Presbyterian Review*. 33(4): 601–613.
- Major ceramic kilns of Japan: Echizen. [S.d.] bleu et blanc, Blue and White America, Inc., Japanese antiques online catalog. www.trocadero.com/blueandwhiteamerica/catalog.html (accessed September 2003).
- Mitford, A. B. 1871. *Tales of old Japan*. London and New York: Macmillan and Co.
- Montreal Museum of Fine Arts. 1989. *The Tokugawa collection: The Japan of the shoguns*.
- Mossman, S. 1873. *New Japan*. London. 477.
- Pekarik, A. 2003. Email communication to the author.
- Qionchua, Wu. 2001. Moving in harmony with nature. *China Daily* (April 11): n.p.
- Reischauer, E. O., and J. K. Yamagiwa. 1951. *Translations from early Japanese literature*. Cambridge, Ma.: Harvard University Press.
- Salmon, P. 1975. *Japanese antiques: With a guide to shops*. Tokyo: Art International Publishers.
- Schilling, D., O. F. M. de Lejarza, and F. de Lejarza, eds. 1934. Relación del reino de Nippon. *Archivo Ibero-Americano* 37: 17, 18.
- Shimizu, Y., ed. 1988. *Japan: The shaping of Daimyo culture*. Washington, D.C.: National Gallery of Art.

CHRISTINE A. SMITH

President

Conservation of Art on Paper, Inc.

Alexandria, Virginia

capi@erols.com

Iron-gall ink was also used for comparison and in order to obtain an unambiguous and full characterization of the most widespread inks used in manuscripts. Raman and infrared spectroscopies allowed us to identify the characteristic vibrational features of each prepared medium. These techniques, together with X-ray fluorescence (XRF) and multispectral investigations of the original document led us to hypothesize that iron salts were periodically added to the original logwood ink. These sequences of ink quality can be ascribed to a shortage of ink during the writing of the manuscript. A small amount of iron-gall ink was not used for writing in historical Japan, but the compound did have a long tradition for aesthetically blackening teeth. This note summarizes the history of the practice and the materials, implements, and methods used. INTRODUCTION. Although iron-gall ink was not used for writing or drawing in historical Japan, where black and gray shades were made with lamp black pigments (usually produced from burnt pine wood or rapeseed oil), the ink was used for another purpose—blackening teeth.