In 1389 he became a secretary in the Mamluk chancery (diwan al-insha\textsuperscript{4}), serving as kattib al-dast, one of the secretaries who accompanied the secretary-of-state (kattib al-sitt\textsuperscript{4}) as he sat with the sultan to dispense justice. In addition to works on law and adab (culture), al-Qalqashandi wrote about the secretarial arts. His stupendous seven-volume Subh al-q\textsuperscript{a}sh\textsuperscript{a} fi s\textsuperscript{a}n\textsuperscript{i}\textsuperscript{a}t al-insha\textsuperscript{[a]} (Dawn of the Night-blind), completed in 1413, is a detailed compendium of the theoretical sciences and practical skills required by a secretary concerned with official correspondence. Intended to be encyclopedic and exhaustive, it was the culmination of the secretarial manuals and encyclopedias written during the Mamluk period and indeed of the whole literature on the arts of writing (adab al-kattib).\textsuperscript{5} Al-Qalqashandi, though the most famous and most exhaustive, is only one of many contemporary sources who wrote about Mamluk calligraphy.\textsuperscript{6}

Along with these written descriptions, we have a host of extant examples. Many fine manuscripts, mainly Koran codices, survive from this period, and the calligraphy used in at least one of them – the Koran manuscript made for Baybars [Figure 8.13] – is even described in several Mamluk sources. The first album of calligraphic specimens to survive from the Arab world also dates from the very end of this period.\textsuperscript{6} According to the colophon, the very large (47 × 30 cm) but slim volume was compiled by Muhammad ibn Hasan ibn Muhammad ibn Ahmad ibn ‘Umar al-Tayyibi al-Shaf‘i on Wednesday 12 Rajab 908/11 January 1503. The ex-libris on the opening page shows that he compiled the work for the library (khizana) of the last Mamluk sultan, Qansuh al-Ghawri (r. 1501–16). Al-Tayyibi’s 94-page text contains an account of the method (tariqa) of writing descended from Ibn al-Bawwab down to the author, who credits himself with inventing two scripts.\textsuperscript{7} The text opens with twelve pages illustrating the ways to make the individual letters according to the method of Ibn al-Bawwab, which, as elsewhere, are formed of dots and measured proportionally. Pages 16–32 of the treatise recount the history of writing and the methods of nibbing the pen. This preface is followed by sixty-two pages with samples of the individual scripts. The precedence of illustration or commentary is clear not only from length (the finely penned illustrations take up two-thirds of the volume) but also from breadth (the illustrations contain samples of nineteen scripts, but the preface lists only seventeen). This book is not a how-to manual; it was a visual encomium designed to display the calligrapher’s prowess and win the favor of the sultan, who himself was interested in adab and a generous patron of the arts.

Apart from their bureaucratic propensity for taxonomy, Mamluk authors classified scripts in several ways. Although they were aware of the six scripts (al-aqlam al-sitt\textsuperscript{a}) codified in the tradition of Ibn Mu\textsuperscript{a}q\textsuperscript{a}, Ibn al-Bawwab, and Ya\textsuperscript{u}q, Mamluk authors did not usually group the scripts in pairs, as writers in Iran and the East did. Instead, Mamluk authors typically divided the scripts in rectilinear and curvilinear groups. Al-Qalqashandi and other Mamluk sources juxtaposed [Figure 8.13] and [Figure 8.14]. [Figure 8.13] Jami‘ al-‘ut\textsuperscript{a}b\textsuperscript{a} al-katt\textsuperscript{a}bi‘\textsuperscript{a} (Complete Calligraphy) by al-Qalqashandi. [Figure 8.14] Shih\textsuperscript{a}b al-d\textsuperscript{a}n Abul-Fida’ah al-Qalqashandi (d. 16 July 1418). [Figure 8.15] The Hij\textsuperscript{a}fat al-Qalqashandi (The Censure of Qalqashandi) by al-Qalqashandi (d. 16 July 1418).
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straight scripts, characterized by the flatness [bust] and rigidity [yabs] of the descenders or sublinear strokes [‘ariqat, ta’iq] to round ones, marked by curvature [taqvi] or softness [lan]. Other authors refer to this juxtaposition as al-aqlam al-yabasa (the dry scripts) and al-aqlam al-bisarattaba (the wet script). This division into rectilinear and curvilinear accorded with function. Book hands [khuttat al-waraq], which included the sub-category of Koranic hands (khuttat al-masahif), were usually rectilinear, whereas chancery hands (khuttat al-kutub) were usually curvilinear.

Mamluk authors further designated the scripts classified in each of these two categories. For example, according to Ibn Basiq (d. 1317), one of the earliest writers on the subject, the rectilinear – the first basis [asli] of writing – comprised muhaqqaq script and its derivatives, rayhan and naskh, and the curvilinear – the second basis – comprises thuluth and its relatives, tawqi’ (also given in the plural as tawqi’ and tawq’i) and riq’a. The rectilinear group has alif-lam al-waraqiyya [a connected lam-alif written as a single stroke with a loop at the bottom], a feature not found in the curvilinear group. This division differs from the one used by many theoreticians and practitioners from the Iranian or Turkish lands, who include naskh in the curvilinear group, and indeed the naskh used in the Mamluk domains is typically more upright than the one used further east.

Most scripts came in various sizes. Based on the illustrations in al-Tayyib’s album, Adam Gacek delineated five sizes of script, with alif ranging from 3 to 0.5 cm. Size affected angularity: the larger the script, the straighter its descenders, the smaller the script, the curved its sublinear curves. Two other features are connected with size: the serif or hook [tarwist] and the closed head-loop or ‘blinded eyes’ of some letters [a feature called tamsi, literally efacement]: the smaller the letter, the less opportunity of adding a serif and the more chance of filling in the loop.

Mamluk sources also grouped scripts as principal [asli] and derived [far]. Al-Nuwayri and al-Qalqashandi listed five fundamental scripts: muhaqqaq, rayhan, naskh, tawqi’, and thuluth. Al-Atbari, however, gave seven fundamental scripts [thuluth, riq’a, muhaqqaq, naskh, tawqi’, waddah, and tamar] and seven derived ones (ash’ar, ghubar, rayhan, manthr, khafji al-thuluth, hawashi, and musalsal). These fourteen, according to al-Zitawi, came in three varieties: large [taqvi], small [khafji], and mixed [muwallad], thereby bringing the total number of scripts to forty-two.

The calligraphy of the Mamluk period is treated here according to the rubrics used by the chroniclers themselves: first the rectilinear group [muhaqqaq, rayhan, and naskh] and their derivatives, then the curvilinear group [thuluth, tawqi’, and riq’a] and their derivatives, and finally several examples of scripts that can be written with characteristics of either group, notably ash’ar, tamar, and ghubar.

Rectilinear scripts

For the Mamluks, the primary rectilinear script was muhaqqaq. The name literally means exact or perfectly executed, and Mamluk chroniclers saw the script in this way as the best representative of book scripts, used for the finest codices, notably copies of the Koran. According to the chroniclers, muhaqqaq was written with a straight alif that measures nine or ten dots high. It is therefore more elongated than the classical Iranian style of muhaqqaq, in which alif measures eight dots. The stems of the letters in muhaqqaq should have a hook or serif, and their ‘eyes’ or loops should be left unfilled.

Although muhaqqaq came to be the prime script for copying the Koran in the Mamluk period, this was not always the case. The earliest Mamluk rulers seem to have been preoccupied more with defining territory and setting up an administration than with commissioning fine Koran manuscripts for their charitable foundations. So far, none can be associated with the grand complexes founded by the early Mamluk rulers, ranging from the vast new congregational mosque established by Sultan Baybars al-Bunduqdar (r. 1260–77) outside the city’s northern walls to the lunear complex established by Sultan Qalawun (r. 1279–90) on the site of the former Fatimid palace. The first Koran manuscripts to survive from the Mamluk period date only from the first decades of the fourteenth century, and they were not copied in muhaqqaq, which was adopted as text script for Koran manuscripts only in the 1320s during the third reign of the sultan al-Nasir Muhammad (r. 1293–1341 with interruptions). The calligrapher most closely associated with the first Koran manuscripts penned in muhaqqaq for the Mamluks is Ahmad al-Mutatabib (the amateur physician or quack). He has left more signed manuscripts than any other calligrapher from the Mamluk period, but he passes unmentioned in the sources, perhaps because he was not a member of the bureaucracy. One of his Koran manuscripts in Cairo is especially important because of its informative colophon, which gives his full name [Ahmad Ibn Kamal Ibn Yahya al-Ansari al-Mutatabib], the date he completed the manuscript (Sh’ban 734/April–May 1334), and the place he worked [Cairo]. This is the first Mamluk Koran manuscript to mention Cairo. The manuscript also includes elaborate notation for use in recitation and a long explanatory appendix on the vocalization used in it. On the top line of the closing page, for example, the three alsis are marked with green dots to indicate hamza al-wal al-qadim. The written alif in allah is added, awkwardly, in Th. That the use of these green dots connects this manuscript to the maghribi tradition, in which scribes had used such punctuation for centuries.

In his Koran manuscripts [Figure 8.1], Ahmad al-Mutatabib continued some of the innovations introduced by Yaqut and his followers and brought to Cairo at the beginning of the century. The Mamluk calligrapher typically used very large sheets (57 × 36 cm) of...
half-baghdadi size, the size that Ahmad al-Suhrawardi had used (Figure 7.2), but with more lines per page (regular pages in the Mamluk manuscript typically have eleven lines of text rather than the five used in the imperial Ilkhanid copies). Ahmad al-Mutatabbhib therefore used less paper [some 400 folios], and so his manuscripts could be bound as single-volume codices, unlike the thirty-volume sets typical of Iraq and Iran. The illumination in Ahmad al-Mutatabbhib's manuscripts follows the style introduced to Cairo at the beginning of the century, with stylized kufic as display script (as here, with the name of the sura, the place of revelation, and the number of verses) and decoration of scrolling palmettes against a hatched ground.

The script in Ahmad al-Mutatabbhib's manuscript sets it apart from other Koran manuscripts made for the Mamluks at the beginning of the fourteenth century: he used a large muhaqqaq, the primary rectilinear script mentioned by the Mamluk sources and the script used for the most part of the Koran manuscripts made for the Ilkhanids since the beginning of the fourteenth century (Figure 7.2). Ahmad al-Mutatabbhib's muhaqqaq, however, is not particularly skillful. His ink is often watery and varies in intensity, as in the dal of hosada, the last word of text on this page. His strokes are bumpy, not smooth, as shown by the wobbly alifs (particularly the red ones indicating unwritten alif), the awkward slope of the alif-lam prefix, and the irregular ends to the long sweeping tails of descending letters in which the tips project like hairs from the thicker strokes. His spacing is irregular. Many letters are crowded, but sometimes he left too much space between letters or words. In the manuscript dated 734/1334, for example, the gap between the opening words of the sura, gil and a'adu, is so large that the illuminator had to add a hatched vertical bar that resembles an alif and interrupts the flow of the calligraphy (Figure 8.1a). Ahmad al-Mutatabbhib was competent, but not more.

During the second half of the fourteenth century, a larger and bolder type of muhaqqaq became popular in the Mamluk domain. In his calligraphic album al-Tayyibi called this script jahl al-muhaqqaq [large muhaqqaq] and illustrated it penning three lines per page and an alif measuring 5 cm. This large script was typical for the opening pages of enormous Koran manuscripts made for the Mamluk elite. At least nine examples have survived, eight of them endowed to pious foundations by Sultan al-Ashraf Sha'ban [r. 1363–77], his mother Khwand Baraka, or his mamluk Arghun Shah and preserved in the Dar al-Kutub in Cairo. These manuscripts are typically copied on bifolios of full baghdadi size, twice the size used by Ahmad al-Mutatabbhib, but they usually have the same number of lines per page (eleven) and thus the same number of folios (some 300–400) bound in a single volume. The text is copied in a stately muhaqqaq in black ink with stylized kufic as display script and opening pages set off in an even grander muhaqqaq, as in this manuscript endowed by Sultan Sha'ban to his complex on the citadel (Figure 8.2).
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RECTILINEAR AND CURVILINEAR SCRIPTS IN EGYPT AND SYRIA

the left. In the Ibrahim al-Amidi group, by contrast, the text of Sura 1, written in black outlined in gold, is spread out so that it fills the double-page spread, a format that was to become standard in later times. To do so, the calligrapher had to reduce the number of lines of text from the five used in frontispieces of the star polygon group to three and consequently increase the size of the script so that \( \text{alif} \) measures over 5 cm, the size illustrated by al-Tayyibi and twice the size of the script used for the main part of the text.\(^{30}\)

The calligrapher of this splendid manuscript, \( \text{‘Ali ibn Muhammad} \), bears the epithet \( \text{al-muktiib} \), indicating that he was a teacher of writing, and \( \text{al-ashtuul} \), showing that he belonged to the entourage of Sultan al-Ashraf Sha‘ban.\(^{31}\) \( \text{‘Ali ibn Muhammad’s} \) script is very good, if not great, and his \( \text{jali al-muhaqqaq} \) owes its impression as much to size as to control. The tall and strong verticals march boldly across the page. The curved \( \text{lam-alif al-warraqiya} \) [Figure 8.2a], the single-stroke combination typical of rectilinear scripts, adds a sweeping diagonal. But the \( \text{alifs} \) lean unevenly: some are upright, some slightly tilted to the left, though none to the right, and the script lacks the tautness of the finest masters like Ahmad al-Suhrawardi [Figure 7.2].

Rather than the calligraphy, the most striking feature of this manuscript, and the associated group, is the expanded decoration, executed in a vibrant palette and often set against a black ground. The predominance of decoration over calligraphy is clear on these pages: the gold ruling covers the tail of \( \text{nuin} \) in \( \text{al-dalin} \), the last word of the sura on the bottom left [Figure 8.2a]. This format contrasts to that in the Koran penned by Yaqut, where the rulings skirt the text. Such lavish illumination must have taken a long time to execute, perhaps as much as four years, the difference between the date of transcription [15 Muharram 774/17 July 1372] and the date of the endowment notice [Muharram 778/May–June 1376], in which al-Ashraf Sha‘ban stipulated that the manuscript be read in his funerary complex known as the Ashrafiyya.\(^{28}\) The illuminator’s major role is also signaled in an elaborate colophon, a rare occurrence in Mamlik times when illuminators were typically anonymous. His epithet \( \text{al-Amidi} \) suggests that he hailed from the town of Amid/Diyarbakr in Anatolia, where several schools of manuscript production flourished under the Beyliks (see Chapter 9). The wealth of Cairo must have attracted foreign artists, who introduced new ideas, including this colorful style of illumination, which seems to have been more important than the calligraphy it accompanies.

The Mamlikus’ desire [and sufficient funding] for enormous size continued through the end of the century, as shown by an enormous single-volume copy of the Koran [Figure 8.3] transcribed in \( \text{muhaqqaq} \) in 801/1398–9 for Muhammad ibn Batur al-Salih al-Dimishqi.\(^{30}\) According to the colophon, it was transcribed by \( \text{‘Abd al-Rahman ibn Yusaируют as Ibn al-Sa’igh} \) with one pen [\( \text{qalam} \)] in 60 days.\(^{31}\) He was a well-known calligrapher [d. 845/1442–3]; author of a treatise on
calligraphy and copyist of several Koran manuscripts in different scripts, including one in naskh dated Shawwal 813/January-February 1411 made for the library of Fakhr al-Saqiq al-Khatzindar, an official of Sultan Faraj ibn Barquq, and another in Cairo dated 814/1411-12.\(^1\)

This Koran manuscript by Ibn al-Sa'igh, the largest copy known to have been made for the Mamlik, is transcribed on enormous sheets that measure over a meter high, slightly larger than the full baghdadī ones used in the other manuscripts transcribed for al-Ashraf Shahān and his court. These sheets, nevertheless, pale in comparison to the elephantine ones used for contemporary copy made for the Timurids (Figure 7.11), which are one and a half times larger. The Timurids probably made these enormous sheets using floating molds, which render only one side of the sheet smooth enough for calligraphy. The full-baghdadī size used for these enormous Mamlik Koran manuscripts represents the limit of traditional technology using dipped molds, but produces paper that is smooth and suitable for writing on both sides. Ibn al-Sa'igh's Koran manuscript therefore resembles standard Mamlik Koran codices, with eleven lines of large muhaqqqiq script per page and several hundred folios bound as a single volume.

As with its Timurid contemporary, pages from Ibn al-Sa'igh's codex attest to the triumph of calligraphy over illumination. In both cases, the major ornaments in the text are the gold circles separating the verses. Ibn al-Sa'igh added vocalization in black, whereas in the Timurid copy, the subtle use of red for markings adds a grace note. The calligraphy in the Timurid manuscript, too, is much finer. Though about three times the size of that in the contemporary Mamlik copy ahlī in this manuscript measures some 4.5 cm, as opposed to 1.4 cm in the Timurid copy, the anonymous Timurid calligrapher's hand is smoother and more fluid. His verticals are straight and taut. Ibn al-Sa'igh's hand, by contrast, is bumptier and looser. His verticals sometimes wiggle or taper, and his strokes do not always connect, as in the upper stroke of kāf at the end of the first full line of text (Figure 8.3a). His vocalization is larger and heavier, his serifs rounder and fatter than the spikes used in the Timurid copy. Ibn al-Sa'igh's script is also more crowded and more rushed.\(^2\)

Mamlik calligraphers continued to use muhaqqiq for large Koran manuscripts until the end of the period. In general, these copies are smaller than those made in the late fourteenth century and have good but not great calligraphy and weaker illumination. Abu'l-Fath Muhammad al-Ansari, for example, penned several copies in muhaqqiq for important Mamlik patrons in the mid-fifteenth century. One manuscript transcribed in Ramadan 847/January 1444 was endowed by Zayn al-dīn Yaha, major donor (istidār al-'alīya) of Sultan al-Malik al-Zahir Sayf al-dīn Iqmaq, to his mosque at the Bab al Khwāk in Cairo on 18 Rabi’ II 848/4 August 1444.\(^3\) Another transcribed in 858/1454 was penned for the Mamlik sultan al-Malik al-Zahir Abu Sa'id Khushqadām.\(^4\) Both are large (the first measures 39 x 42 cm, the second 88 x 61 cm) single-volume manuscripts

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Figure 8.3a Figure containing Surat 65:1-4 from a single-volume Koran manuscript with eleven lines per page transcribed in 801/1399 by ’Abd al-Rahman ibn Yusuf, known as Ibn al-Sa’igh. This is the largest Koran manuscript to survive from Mamlik times. According to the colophon, it was transcribed by Ibn al-Sa’igh ‘with one pen in sixty days.” It is written in a large, clean muhaqqiq with eleven lines per page. Titles are penned in thuluth, unlike most Koran manuscripts from this period which have titles in a stylized kufi.
written with eleven lines of muhaaqqiq script on regular text pages and fancy opening and closing double pages. These spreads, the pages most frequently illustrated in the scholarly literature, typically have five lines of muhaqqiq surrounded with arabesque scrolls on a red-hatched ground and sandwiched between cartouches of stylized kufic that give the name of the sara and the number of verses. The codex was also handsomely set in flapped bindings of dark-brown leather with gold-tooled ornament.55

Muhaqqiq thus became the standard script for Koran manuscripts produced in the Mamluk period. It was so common that al-Tayyibi, writing at the very end of the period, uses the name musahhit (literally, Koran codex) to designate a medium-size muhaqqiq, written with five lines per page and an alif measuring 2 cm.56 Rayhan, considered in Iran to be the smaller variant of muhaqqiq, was not nearly as common in Mamluk times.37 For most Mamluk authors, rayhan was only a secondary script.58 Al-Tayyibi did not illustrate it alone, but interspersed it between lines of a larger curvilinear script (Figure 8.4) called tawaqi' (signatures; the plural of tawqai').59 The smaller text in rayhan contains a passage by 'Ali ibn Abi Talib, the larger one in tawaqi' a passage by the Persian pre-Islamic ruler Khosrow Anushirwan. The most notable feature of al-Tayyibis rayhan is the elongated shape and uniform height of the strokes for fatha and kasra, strokes that resemble those in Ibn al-Sa'igh's manuscript (Figure 8.3). The mixture of sizes and scripts shown by al-Tayyibi, however, was not popular in the Arab lands, nor was rayhan common for Mamluk Koran manuscripts.60

After muhaqqiq, the most common script used for Koran manuscripts in the Mamluk period was naskhi, the rectilinear script traditionally used for copying. Already at the beginning of the fourteenth century Mamluk calligraphers tried to regularize and monumentalize this script to make it a fitting context for God's word. We can see this in a particularly well-documented Koran manuscript, once bound as a single volume but now dispersed (Figure 8.5).61 A double page at the end contains decorative medallions, one on the right with the certificate of commissioning for the library (Kitabkhana) of the Mamluk sultan al-Nasir Muhammad and the one on the left with the date of completion, Tuesday, 27 Ramadan 713/15 January 1314. Panels above and below say that it was completed at the hands of Shaddi ibn Muhammad ibn Shadhi ibn Da'ud ibn 'Aysha ibn Abi Bakr ibn Ayyub. His lengthy genealogy shows that he was a minor prince of the Ayyubid house of al-'Adil, great-grandson of al-Nasir Da'ud, ruler of Karak (d. 1358); and grandson of al-Zahir Shaddi (d. 1358). The calligrapher is mentioned only briefly in the Mamluk sources: Ibn Hajir al-Asqalani recorded that Shaddi ibn Muhammad was born in 681/1282 and died suddenly in 740/1341.62

Illuminated pages at the beginning and end of the codex give further information about the team of artists who worked on this manuscript and their hierarchy. Each page bears a tiny inscription written vertically between the gold frame and the marginal haph. The one on the opening page says that the opening and closing pages were done by Aydughdi ibn 'Abdallah al-Badr, who had been taught by the master Sandali. The one on the last page says that the Koranic text was outlined (zannakat) by 'Ali ibn Muhammad, the draftsman (al-razam), known as the left-handed (al-asa). A decade earlier Aydughdi had worked with the calligrapher Ibn al-Wahid on the Raybars Koran (Figure 8.13), and this inscription shows in the intervening years Aydughdi had advanced from outline to decorator, gaining his own assistant for outlining, the left-handed draftsman 'Ali ibn Muhammad.63 Two short certificates on the final folio of Shaddis Koran manuscript show the Mamluk concern with textual accuracy. The first is a statement of authentication declaring that the text is without error. It is signed by Muhammad al-Sarraj al-Muqri, whose epitaph...
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without serif but beveled at the top, and the tail of mim descends as a straight vertical. Lam-ali' is written as a single connected stroke, and the eyes of the letters are filled. Other letters impinge on each other and are sometimes connected, as in dal to final ha' in the bottom line. The baseline undulates. Many of these features continue the style of naskh that had been current in twelfth-century Syria, as in the Koran manuscript made for Nur al-Din ibn Zangi [Figure 6.10b]. Shaddi's naskh is quite different from that used in the Ilkhaniid domains. The naskh penned by Yaqut in 688/1289, for example, is a lighter and tighter script in which alif slopes slightly to the left and has a hook to the right. Though the illumination in Shaddi's manuscript is copious and its patron important, the calligraphy is second-rate, his hand wavers, and the letters are cramped. Though ambitious, it is ungenerous. Shaddi's hand seems rushed, and he made mistakes, emitting, for example, the word al-amr and later squishing it above the line [Figure 8.5a]. In regularity, majesty, and spaciousness, the Koran manuscripts made for the Mamluks in the early fourteenth century do not compare to the contemporary ones made for the Ilkhaniids.

Naskh was the main text script in the Mamluk period, used for copying a wide variety of subjects ranging from hadith, law, and grammar to literary works with illustrations. Although no copies of the Koran survive from early Mamluk times, we do have dated illustrated manuscripts. The finest is a compendium of medical works, including a copy of Ibn Butlan's Risalat al-madinat al-attibba' (Banquet of Physicians) transcribed by Muhammad ibn Qaysar al-Ishandari in 674/1277, its upright naskh with large bowls continues the style used in previous centuries in Syria, but with the occasional hook to the left on alif and other upright strokes.

These manuscripts were produced in a number of cities. Cairo, the Mamluk capital, attracted the best talent and seems to have been the main site of production for all the arts, but Damascus, the second city of the realm, was also home to an active school that produced illuminated and illustrated manuscripts for both Muslim and Christian patrons. Ghazi ibn 'Abd al-Rahman al-Dimashqi (1332-1310), for example, was a professional calligrapher and teacher of calligraphy who transcribed [and illustrated] many books there, including a copy of al-Hariri's Maqamat (Assemblies) now in the British Library. Ghazi's most famous successor was the calligrapher (and illustrator) Ibn al-Durayhim al-Mawsili, who, like his predecessor, is known from both signed manuscripts and written chronicles. The most famous of his works to survive is a copy of the bestiary Manafi' al-hayawan (Usefulness of Animals) in the Escorial [Figure 8.6] whose colophon identifies Ibn al-Durayhim as compiler, copyist, and illustrator of the codex that was finished in Rabi' 1 755/March 1354.

Ibn Hajar al-Asqalani's lengthy biography of Ibn al-Durayhim elucidates the life and position of a Mamluk calligrapher and helps us understand the fluid relationship of province to capital in the
of age, he moved to Damascus, where he set up a prosperous business as a merchant, and then, in 732-3/1331-2, to Cairo, where he continued to ply his trade. The 1340s and early 1350s, however, were difficult years for Ibn al-Durayhim, probably because of the intermittent warfare among the amirs of Damascus. His house there was confiscated, and his books banned. In 1348 he was even exiled from the city. He moved between Aleppo and Cairo, finally returning to Damascus, where he was reintegrated into the urban elite, working at the Great Mosque and a member of its diwan. Ibn al-Durayhim died in Safar 763/December 1361 at Qus in Egypt while on an ambassadorial journey to Abyssinia. The calligrapher's peregrinations underscore how difficult it is to define local schools of manuscript production within the Mamluk domains.

Ibn Hajar praises Ibn al-Durayhim's intellect as sharp but faulted his handwriting as mediocre. It was too ornate and mannered, and the chronicler concludes that better hands were available. The Escorial bestiary bears out Ibn Hajar's assessment. Each page of the 154 folios in this medium-sized manuscript has thirteen lines of naskh on paper of one-eighth baghdadi size, a layout comparable to contemporary manuscripts attributed to Damascus, such as a copy of Ibn Zafar al-Sigilli's 'Subwn al-Mattā' [Consolation for the Obedient]. The thirteen-line format is similar to Koran manuscripts made for the Mamluks in the early fourteenth century, but the sheets are half the size used in large codices such as the one transcribed by Shadhi [Figure 8.5]. Like most Mamluk calligraphers, Ibn al-Durayhim penned the text in black naskh, marking textual divisions with small gold rosettes of the type used by Yaqut (Figure 7.3). Script and illumination resemble those of Mamluk Koran manuscripts like the one by Shadhi, with a clear but somewhat ungainly naskh characterized by large swirling tails that bend and widen at the end and many filled loops to the letters. The written area is left unruled, but a thin blue line, like the one used around chapter headings in Shadhi's Koran manuscript, surrounds the illustrations. For the illustrations themselves, Ibn al-Durayhim, like other painters of his time and place, looked further afield, and many elements of the ninety-one illustrations, including the representation of the herons, are indebted to the Saljuq and Mongol traditions of Iran. Naskh continued to be used for many presentation copies of the Koran made for the Mamluk elite. In 1435, for example, the sultan al-Ashraf Barsbay [r. 1422-38] donated an almost identical pair of two-volume manuscripts copied in naskh to the madrasa he established in the Ambarin [amber-workers] district in Cairo. Neither manuscript is signed, but the similarities of script and illumination suggest that both are the work of the same team of calligrapher and illuminator. Like the Mamluk Koran manuscripts in minbarqawqiq, each copy in naskh has some 350 folios, eleven lines to the page, and elaborate double-page frontis- and finispieces in each volume [Figure 8.7]. The layout of these spreads imitates the one introduced in large
Koran manuscripts in muhaqqaq associated with al-Ashraf Sha'ban (Figure 8.2), in which the calligrapher penned a few lines of text in this case five rather than the three used in the earlier manuscript framed by elaborate illumination containing the name of each sura, number of verses, and place of revelation, here Surat al-Falaq [Dawn, 113], and Surat al-Nas [Mankind, 114]. To spread out the text on his double pages [Figure 8.2], 'Ali ibn Muhammad al-Mukrib had used the large muhaqqaq (jali al-muhaqqaq). Here the anonymous calligrapher used space rather than size to spread out the text. The words themselves are written in an easy-to-read naskh with the swooping, angular and thickening nun typical of the Mamluk style but with copious spaces between words.56

Mamluk sources call such a script with wide spaces between words manthur (literally, scattered or dispersed).57 Al-Nuwayri regarded manthur as a variety of naskh, and al-Tayyibi illustrated a page of manthur with a Tradition of Ibn 'Abbas written in a small naskh with alif measuring 1 cm and small circles inserted between words.58 Al-Tayyibi also used this script, with the same circles to set off the Koranic phrases, to transcribe most of his introduction to his treatise concerning the principles of writing according to the method of Ibn al-Bawwab [Figure 8.7].59

The double frontispiece to the Koran manuscript endowed by Barsbay (Figure 8.7) illustrates the hand of a proficient calligrapher but not a master like Yaqut [Figure 7.2]. Looking at the opening lines on each page shows why. In standard fashion, the Mamluk calligrapher extended the bism in the basmala at the beginning of each sura so that it fills the first line of each page. But the Mamluk calligrapher did not plan as carefully as Yaqut had, and the basmala is not the same on the facing pages. On the left page the Mamluk calligrapher made too long an extender and therefore had to squeeze the text at the end of the line, leaving no room for a gold rosette to separate the invocation from the opening words of Surat 114. The calligrapher’s ink also varies in intensity, and his strokes are of uneven thickness as with the sin in basad, the final word of Surat 113 [Figure 8.7b] or in the left basmala. The drawn-out stroke is flaccid, without tension.

As with Mamluk Koran manuscripts in muhaqqaq [Figure 8.2], much of the striking effect of these pages comes not from the calligraphy but from the elaborate illumination. Additional punctuation for a full or optional stop is added in vermilion, a much bolder contrast than the subtle red-black combination used in the eleventh-century Koran manuscript made for the Timurids [Figure 7.1]. Gold rosettes dotted with red and blue and the headings in a spindly white kufic are similar to those used in contemporary Timurid illumination, but the colors are flashier. Altogether, the Koran manuscript made for Barsbay is a competent, if not inspired work. Later connoisseurs appreciated its quality, or at least the amount of brasssy gold in its illumination, and this volume was restored by Yusuf Mawardi in Jumada II 1113/November 1701.60

Naskh was so popular in the Mamluk period that calligraphers developed several variants, occasionally playing them off against each other on the same page in fine manuscripts. We can see this most clearly in copies of al-Busiri’s laudatory poem Kawakib al-durriyya (The Pearly Stars). The author, an Egyptian poet of Berber origin [d. 1356], was also a skilled calligrapher, Traditionsist, and celebrated Koran reciter.61 His poem concerns the incident in which the Prophet Muhammad placed his mantle on the shoulders of Ka‘b ibn Zuhayr, a poet who himself had composed an ode in praise of Muhammad and recited it to him. Al-Busiri’s ode, often known as Qasidat al-Burda (Ode to the Mantle), is the most renowned poem in the Arabic language, thought to convey the mantle’s blessing to all who hear it. The poem was particularly popular in Mamluk times, and copies made over the course of the fifteenth century were increasingly provided with lavish illumination, perhaps because the poem was read ceremonially at court. Just as al-Bukhari’s Traditions were read on the Prophet’s birthday.62 Al-Busiri’s poem inspired a host of other authors, and already in the Mamluk period it was usual to embellish the text as a takhmis (literally, making of five), a poetic form in which each
Figure 8.8 Page from a manuscript of Busiri's Kawakib al-duwraysa, copied by Qanam al-Sharif for the Mamluk sultan Qu'tibay. 1370.

Qanam al-Sharif penned the opening hemistich of al-Busiri's text in a large black naskh, appending the second hemistich diagonally at the left side in a different color, using a curvaceous script like thuluth, but with the occasional unauthorized connection typical of tawqi'. Above each line of the main text are three lines of amplification written in a smaller naskh in a different color. Size and color thus distinguish text from amplification.

Another color. Centered above each horizontal line are three hemistiches of amplification that rhyme with the first hemistich of al-Busiri's text. This layout of long and short lines for text and commentary/amplification had been used for poetic manuscripts since the eleventh century (Figure 5.10), but Qanam al-Sharif elaborated the scripts and colors: he penned the horizontal line in a large and very flat naskh, appending the diagonal words at the end in a more curvilinear thuluth, with occasional unauthorized connections typical of tawqi', and added the three lines of amplification in a regular size of naskh. 65

Qanam al-Sharif's calligraphy is clear, but somewhat stiff and mannered. The colors alternate regularly, even monotonously, 66 and the script is adorned with unnecessary flourishes such as knots in the tail of dama and letters in final position like ta' mutabba'a. The calligrapher's spacing is irregular as well, and he often had to pile up the last words of the hemistiches in the amplification to make a rectangular block. Furthermore, the first hemistich of al-Busiri's text does not occupy the horizontal space, so Qanam al-Sharif had to fill out the line with the first word or two of the second hemistich. Color thus does not coincide with meaning. Most of the effect of this codex comes from the copious and flashy gold illumination, particularly on the double frontispiece and colophon. 67 It is a book meant to be seen and appreciated for its glossy decoration, not revered for the calligraphy of its words. 68

Mamluk sources use various names for the large version of naskh, including al-mati (literally, body of the text), jaddah al-naskh or naskh al-faddah (literally, the naskh for divulging secrets) and al-waddah (literally, clear). 69 Writing about this time, al-Tayyibi calls such a script al-naskh al-faddah and illustrates it as a medium-sized script, with five lines to the page and an alif 2 cm high. 70 According to al-Athari, the script was executed with a pen six horse-hairs wide and had open loops (i.e., no tanwin), but both Qanam's hand in this manuscript of al-Busiri's ode and al-Tayyibi's illustration show blind eyes for the loops in such letters as 'ayn, 'ayn, and mim. In both examples, alif is distinguished by the total lack of hook and the tails of final matn, yun, and similar letters are exaggerated and have the characteristic bend at the bottom of the large tail and a broadening stroke at the end of the loop.

Just as naskh came in a large size, so too Mamluk authors describe and illustrate a small version called hawashi (literally, glosses). 71 Al-Tayyibi illustrates two pages of Traditions in this script, which belongs to his smallest group, with eleven lines per page and alif measuring 1 cm. 72 On the second page, he wrote the eleven lines horizontally, but on the first page he elaborated the format by continuing the text in zigzag loops in the margins. This small script, which was perfect for adding glosses to a text, had been used this way at least since the thirteenth century in manuscripts produced in Iraq and the Fars. In the famous copy of al-Hariri's Magamat (Assemblies)
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written and illustrated by Yahya ibn Mahmud al-Wasiti at Baghdad in 614/1217, for example, the text is written in horizontal lines of black naskh with zig-zag lines of smaller red script added in the margins.74

Curvilinear scripts

Thuluth (literally, one-third) was the chancery script pare excellence, and, like its rectilinear book counterpart muhaqqaq, one of the two principal scripts [asl].75 According to Mamluk sources, in thuluth, alif which measures seven or nine dots, slants slightly to the left and has a bend at the bottom left, a shape that led the late Mamluk chronicler al-Hiti to dub it picturesquely as the figure of a man looking at his feet.76 To balance this hook at the bottom left, alif always has a serif on the upper right. Because of the sloping alif, individual words also slope from upper right to bottom left. Dots are usually set on a slope as well. The script's roundness is emphasized by the hooks on the end of descenders and the final ha' written like a squiggle. Thuluth also has unauthorized connections between some letters and is usually written without filling in the eyes of the letters [tams].

In Mamluk times thuluth was particularly popular as a display script in manuscripts, used for titles and colophons in which it was deliberately played off against a text script of muhaqqaq or naskh and often distinguished by color or outlining.77 In Koran manuscripts, it was one of two scripts [the other is a stylized kufic] used for sura headings. The enormous copy penned in muhaqqaq by Ibn al-Sa‘igh [Figure 8.3], for example, has chapter headings in white thuluth set against an ultraslim one ground and framed in gold. Its script includes unauthorized connections, notably to initial, as used since the tenth century [Figure 6.14]. Ibn al-Durayhim's bestiary in naskh [Figure 8.6] has titles in gold thuluth outlined in black. The colophon is written in the same way. Thuluth was also standard for colophons and frontispieces. In the Koran manuscript that Shadi penned for al-Nasir Muhammad [Figure 8.5], for example, the double-page dedicatory frontispiece is written in red thuluth.78 Similarly, in his copy of the book of al-Husain's ode, Qanam al-Sha‘rani used a large thuluth swinging out to the right like pennants. The same script is used for the pinwheel designs, but the verticals are serif-less and point toward the center, enclosing the shorter anonymous text inlaid in gold between plain gold bands.79 Not only are the layouts inventive, so are the letter forms themselves. Note, for example, the clever way in which the eye of sad in the sultan's name al-nasir in the horizontal band is pierced by an upright like a stick fastened to a skewer [Figure 8.9a]. Color and texture enhance the effect. The texts are inscribed in shiny gold, and the pinwheel inscriptions resemble a buckle cinching a belt, with strokes radiating from a gemstone. The ground around the pinwheel inscriptions is the only part of the lid that is pierced. When the incense was lit, the smoke would filter out through these holes, and the radial inscription would twinkle behind the smoke wafting over the ruler's name.

Al-Qalqashandi included a lengthy section on the tughra used on insignia of important military commanders.80 A specially appointed person in the diwan al-ma‘sha’ drew up the tughra, which secretaries then inserted into the blank space left at the head of a document above the basmala. The text contained the sultan's name and honorifics, sometimes with a benediction. A complex tughra with many strokes was written in large [jali] thuluth, but a shorter one with fewer strokes was written in small [mukhtasar] nizar. To make his point, al-Qalqashandi described and illustrated two examples of the tughra drawn up some seventy years apart for two different Mamluk sultans: the first for al-Nasir Muhammad, and the second for al-Asif Shahin, the last to use the tughra. Al-Qalqashandi's illustration of al-Nasir Muhammad's tughra shows a thick thuluth script in which the bodies of the letters squashed at the bottom of tall stems that extend six times the height of the narrow zone containing the letters. The thirty-five verticals are arranged so that a pair alternates with a single stroke, with a pair at each end of the composition. These thick black vertical strokes [muntasibat], intended to contrast with the white surface of the paper, are the most striking feature of the Mamluk tughra.

The calligraphy of the tughra was also adapted for inscriptions on objects made for the sultan, such as a stunning incense burner made for al-Nasir Muhammad [Figure 8.9].81 Like most Mamluk metalwares, it is fashioned of brass inlaid with gold, silver, and a black compound and decorated exclusively with inscriptions.82 All of the texts, inlaid in gold, offer glory [izz] to the ruler. Shorter texts in small roundels give somewhat anonymous praise [glory to our master the sultan], but longer texts, given in slightly varying forms in horizontal bands and pinwheels on both base and lid, name him as Sultan al-Malik al-Nasir, using standard titles such as the learned [al-‘alim] and the diligent [al-‘anil].

The content, then, is repetitive, but the calligraphy is extremely creative. In the horizontal bands, the text is written in a thick thuluth with very compressed letters and extremely attenuated verticals that march across the surface like songs. Qanam al-Sha‘rani, for example, used a large thuluth swinging out to the right like pennants. The same script is used for the pinwheel designs, but the verticals are serif-less and point toward the center, enclosing the shorter anonymous text inlaid in gold between plain gold bands.83 Not only are the layouts inventive, so are the letter forms themselves. Note, for example, the clever way in which the eye of sad in the sultan's name al-nasir in the horizontal band is pierced by an upright like a stick fastened to a skewer [Figure 8.9a]. Color and texture enhance the effect. The texts are inscribed in shiny gold, and the pinwheel inscriptions resemble a buckle cinching a belt, with strokes radiating from a gemstone. The ground around the pinwheel inscriptions is the only part of the lid that is pierced. When the incense was lit, the smoke would filter out through these holes, and the radial inscription would twinkle behind the smoke wafting over the ruler's name.