THE THIRTEEN VOLATILES
REPRESENTATION AND SYMBOLISM

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Introduction

The few codices, or native pictorial books, left behind by the Aztecs are remnants of a much larger tapestry of symbolism and philosophy which, before European contact, was passed on to every new generation, which in turn wove more onto it, making it richer and more beautiful. Since the Spanish Conquest, the fabric of this ideological system has been torn, and its disintegrating threads have become interwoven with those of Western thought. Nevertheless, small pieces, when interpreted together, can provide a glimpse of the whole.

With this larger purpose in mind, I will focus on one particular theme in this essay. On page 71 of the *Codex Borgia,* twelve birds and one butterfly are shown around a central image of the sun god, Tonatiuh (see color fig. 1). Since not all of them are strictly birds, they are referred to collectively as the thirteen volatiles. These volatiles appear in the *Codex Borgia* and other codices in a certain order, and they are numbered from one to thirteen. Early in this century, Eduard Seler proposed that these volatiles represent the thirteen 'hours" of the day, with the first volatile presiding over the hour of dawn, the seventh over midday, and the last over dusk (1963, 2:237-243). Although this may be true, it is more likely that these volatiles are associated with the *trecena,* the thirteen-day "week" of the ritual calendar. H. B. Nicholson has suggested that they symbolized the thirteen heavens, as well, giving the volatiles symbolism of both time and space (1971:407).

The *Codex Borgia* is a most valuable and reliable source, since it is certainly a pre-Conquest document, whose detailed representations of the volatiles are not tainted by Spanish influence. The problem is that these representations are not naturalistic, but rather stylized, making their identification very difficult. Even though about forty Central Mexican ritual-calendrical codices are known to exist (Glass, 1975:39),

the thirteen volatiles appear in only three other codices —the *Codex Borbonicus,* the *Codex Tudela,* and the *Aubin Tonalamatl.* The *Aubin Tonalamatl* is a screenfold book which may be of pre-Conquest origin. Unfortunately, its representations of the thirteen volatiles are crude and not useful, and it is not used in this essay. The background information on the other two codices is important to the interpretation of the thirteen volatiles, so I will briefly describe their merits and liabilities.

Although the *Codex Borbonicus* is a screenfold book and was undoubtedly painted by a native artist, it was probably made in the first two decades after the Conquest (1521-1541) (Glass and Robertson, 1975:97), making it less authoritative than the *Borgia.* It shows the thirteen volatiles on each of what used to be the first twenty pages (the first two have been lost). It depicts each volatile with a numbered day of the *trecena* and one of thirteen gods called Lords of the Day. Although these associations are useful, the representations of the volatiles are not readily identifiable, since they are crudely drawn and inconsistent, varying from page to page.

The *Codex Tudela* is dated 1553; it was made on European paper and bound like a European book (Glass and Robertson, 1975:172). Its late date indicates that it is not very authoritative, since over thirty years had passed since the Conquest. For example, the gods shown with the thirteen volatiles in the *Codex Tudela* are not the Thirteen Lords of the Day, as would be consistent with earlier codices, but rather the Nine Lords of the Night, with the first four repeated (Nicholson, 1971: 406). Although the discoverer of this codex, for whom it is named, wants to attribute both the written text and the pictorial work to Roman Catholic missionaries (*Tudela,* 1980:40, 49), it is more likely that the Spanish author was working in collaboration with a native artist, since the illustrations display Aztec artistic conventions. The representations of the thirteen volatiles on pages 98v and 99 of this codex are much more naturalistic than those of the other codices, and above the volatiles appears a Nahuatl gloss, naming each volatile (see fig. 2). Although Nicholson (1971) lists these names as the names of the thirteen volatiles, the integrity of this information is questionable and must be used in conjunction with other sources.

By and large, the scholarship on the thirteen volatiles is brief and sketchy, and only a few sources are useful in this study. The most important of these are works by Bernardino de Sahagún, Seler, and Rafael Martín del Campo. Sahagún, a missionary who lived in Mexico from 1529 until his death in 1590, created a corpus fundamental to

the study of the Aztec civilization. His *General History of the Things in New Spain* was written in Nahuatl, and although it does not specifically refer to the thirteen volatiles, the eleventh volume describes plants and animals from the Aztec point of view, with Nahuatl nomenclature.

Seler wrote his commentary on the *Codex Borgia* almost a century ago. It still stands as the chief interpretation of that codex, and it puts the thirteen volatiles in the larger context of Aztec iconography. His article, "The Animal Pictures of the Mexican and the Maya Manuscripts" (1939), is also of great help. Nevertheless, Seler lacked the scientific knowledge that has been gathered over the past decades, nor did he have access to sources such as Dibble and Anderson's publication of Sahagún's *General History* or the *Codex Tudela,* whose discovery was announced in 1947 (Glass and Robertson, 1975:172). For this reason, his identifications of the volatiles are unreliable, and his intuitive interpretation of their symbolic significance must be revised.

Martín del Campo's 1940 article in the *Anales del Instituto de Biología* is an interpretation of Sahagún's descriptions of birds. He quotes Sahagún's entries and identifies the Nahuatl names of the birds with scientific nomenclature. Unfortunately, he does not give the reasoning behind his assertions, so his conclusions must be scrutinized.

The interest I take in writing this essay stems from the inconsistencies that exist among the codices and the scholarly works. The representations of the volatiles differ from codex to codex, sometimes greatly, and scholars disagree on their correct identification. These conflicts warrant closer examination. I will attempt to identify each of the thirteen volatiles with the greatest certainty possible, by synthesizing conflicting arguments and presenting evidence from outside sources. Of course, these identifications cannot be definitive, since the representations in the codices do not lend themselves to exact classification, and since the Aztec religion varied geographically and was internally inconsistent. Having established the probable identity of a volatile, I will then examine its symbolic significance, not only in the context of the thirteen volatiles, but also in Aztec religion as a whole. Rather than present every connection a volatile may have, I prefer to analyze only its major symbolism, especially symbolism derived from its natural attributes like coloration and behavior.

Volatiles I and II: Hummingbirds

Representation and identification

The first and second volatiles are shown in the *Codex Borgia* with long, straight, yellow bills, with no division between the upper and lower bill. The first is painted dark gray and is identified by Seler as *xiuhuitzilin,* or the "blue hummingbird", and the second is a brownish color, which he identifies as *quetzalhuitzilin,* or the "green hummingbird" (*Codex Borgia,* 1973:71). The representations of these birds in the *Codex Tudela* and the *Codex Borbonicus* are very similar to those in the *Borgia,* although in these two sources, the gray of the *xiuhuitzilin* is lighter, and the green of the *quetzalhuitzilin* is brighter. Above the depictions of the first two volatiles in the *Codex Tudela* (n. d.: 98v) are the glossed words "xuitzil" and "quetzal huitzil", which agree with Seler's identifications.

Sahagún writes a general commentary on the hummingbird and its behavior, as well as brief descriptions of eleven varieties. The first two varieties listed are *quetzalhuitzilin* and *xiuhuitzilin* (1963, 11:24):

> [*Quetzalhuitzilin*]
>
> Its throat is chili-red, its wing-bend ruddy. Its breast is green. Its wings and its tail [feathers] resemble quetzal feathers.
>
> [*Xiuhuitzilin*]
>
> It is entirely, completely light blue like a cotinga, pale like fine turquoise. It is resplendent like turquoise, fine turquoise.

On the basis of these descriptions, Martín del Campo suggests that *xiuhuitzilin* is the species *Calypte costae,* Costa's Hummingbird, and that *quetzalhuitzilin* is *Selasphorus platycercus,* the Broad-tailed Hummingbird (1940:391). These identifications, however, are questionable. The Broad-tailed Hummingbird does have red throat markings and long and green tail feathers, but its breast is white, not green (Tyrrell and Tyrrell, 1985:18). Nevertheless, this species is the best candidate for the *quetzalhuitzilin,* since no other hummingbird so closely matches Sahagún's description. Costa's Hummingbird, with its gray plumage and magenta markings (Tyrrell and Tyrell, 1985:21), does not even come close to the completely turquoise blue coloration that Sahagún emphasizes. In fact, *no* hummingbird has plumage of that color. It is entirely likely that such a bird once existed but has since become

extinct. More likely, however, Sahagún's description is inaccurate for some reason.

The prefix *xiuh–*, which is added to the stem *huitzilin,* has several meanings. It can indicate a solar year, the color turquoise blue, or the element of fire, such as in Xiuhtecuhtli, which means "Lord of Fire". Both Seler and Sahagún seem to interpret this prefix here as the color turquoise, which is inconsistent with the depictions in the codices. Whereas the green hues of the *quetzalhuitzilin* in the *Codex Borgia* has faded due to pigment instability, the depiction of the *xiuhuitzilin* was probably always gray, not simply a faded blue. Not only do the *Codex Borbonicus* and the *Codex Tudela* also show this bird as gray, but these codices also have other illustrations, often on the same page which display unfaded blue hues. The first volatile is therefore a gray hummingbird.

Many hummingbirds, including Costa's, have chiefly gray plumage. If the prefix *xiuh–* really referred to fire instead of turquoise, the red markings of Costa's Hummingbird (or a similar species) could symbolize flame, and its gray feathers could signify ash. Even though Sahagún may have been mistaken in his description of the *xiuhuitzilin,* he specifically describes the plumage of the general hummingbird and three varieties of hummingbird as "ashen" (1963, 11:24, 25). The fact that the *Codex Borbonicus* pairs the first volatile with Xiuhtecuhtli as Lord of the Day (Nicholson, 1971: Table 2) also points to the interpretation of xiuhuitzilin as "fire-hummingbird".

Symbolic significance

The hummingbird in general is a superlative creature in several ways. Not only is it the smallest bird, but it also has the narrowest beak and the highest metabolism, and it can beat its wings faster than any bird —up to seventy-nine times per second (Skutch, 1973). Furthermore, the bright and varicolored plumage of hummingbirds makes them beautiful and highly conspicuous. These extraordinary attributes are reason enough for the hummingbird's prominence in Aztec mythology and its complex symbolism.

The hummingbird symbolizes the cardinal direction of West (Nicholson, 1971:405). On the first page of the *Codex Fejervary-Mayer,* as well as in *Codex Vaticanus B* (1896: 18) and possibly in the *Codex Borgia* (1963: 51), a hummingbird is shown perching on the Tree of the West (Seler, 1939:39). To a minor degree, the hummingbird is also linked to the Tezcatlipoca of the West, Quetzalcoatl. The second

volatile, *quetzalhuitzilin,* is connected to this god by name. The *Codex Magliabecchiano* shows a hummingbird sucking a flower connected to Quetzalcoatl's headdress (1903: 61). In two instances, the *Codex Borgia* (1963: 40, 44) portrays Quetzalcoatl without his usual Ehecatl mask, looking out of the bill of a hummingbird, instead. Both images occur in the enigmatic section of the *Borgia* which Seler labels "The Voyage of Venus through the Underworld", and the meaning of the association between bird and god is not readily apparent.

The hummingbird's chief symbolic association, however, is with the Tezcatlipoca of the South, Huitzilopochtli. The name of this god can be broken down into its components, *huitzilin,* or "hummingbird", and *opochtli,* which can mean either "south" or "left"; they are usually read together as "Hummingbird-on-the-left" (Davies, 1973: 17). As part of his name, the hummingbird was symbolically linked to Huitzilopochtli through his three divine roles: (1) as migratory tribal god, (2) as the god of the morning sun, and (3) as god of war and sacrifice.

First of all, the hummingbird bears important similarities to Huitzilopochtli in his role as the migratory tribal god. As shown by the *Codex Boturini* (1944), Huitzilopochtli led the Aztecs from their homeland, Aztlan, and guided them on more than a dozen migrations before finally reaching Mexico-Tenochtitlan. Notably, this codex does not depict Huitzilopochtli anthropomorphically, but rather as the head of a hummingbird. Like this god, the hummingbird is migratory, too. During the day, the bird "migrates" from flower to flower, and during the year, it migrates north and south. Most species mentioned by Sahagún spend the summer months in the Valley of Mexico, and then fly to warmer latitudes for the wintertime (Montes de Oca, 1963: 15-40).

Secondly, the hummingbirds symbolically connected to Huitzilopochtli by way of his role as god of the morning sun. To begin with, the hummingbird is diurnal, awake and flying only during the day, just as the sun 'flies" only at daytime (Hunt, 1977:68). Hummingbirds were believed to be the souls of dead warriors who accompanied the new sun across the morning sky (Davies, 1973: 18). Interestingly enough, Eva Hunt suggests that the hummingbird's unique method of flying is analogous to the movement of the sun across the seasons. The hummingbird can fly forwards, stop and hover, and fly backwards, too. Hunt reasons that the sun exhibits the same behavior through the ecliptic: it hovers at the summer solstice, "flies backward" until it

stops and hovers at the winter solstice, and then "flies forward" until it returns once more to the summer solstice (Hunt, *ibid.*).

Light and color imagery also help to explain the association between the hummingbird and this solar god. The *Codex Borbonicus* (1899: 34) depicts Huitzilopochtli with his entire body painted blue, symbolic of the daytime sky. This recalls the blue hummingbird, *xiuhuitzilin,* and Sahagún's description of it: "resplendent like turquoise, like fine turquoise". Hummingbirds' throat, crest and tail feathers commonly have a metallic sheen which makes them glint and shine in the sunlight (Skutch, 1973: 17, 30). Several hummingbirds which Sahagún mentions have strong, red metallic markings. He describes the feathers of the Ruby-throated Hummingbird as "flaming, like fire. They glisten, they glow" (1963, 11:26). These red markings could symbolize the dawning sun, since it was often the same color, as Sahagún specifies: "When [the sun] issued forth, sometimes he was blood-colored, bright red, ruby-red" (1953, 7:1).

Thirdly, the hummingbird is also linked to Huitzilopochtli through his role as god of war and sacrifice. In the mind of the Mexica, war and sacrifice were intimately connected. The purpose of warfare was to capture enemy warriors, so that they could be sacrificed and their hearts offered to the sun. Symbolically, the pulsating movement of the heart provided the sun with the energy it needed to continue its journey across the sky. Since Huitzilopochtli was a solar deity, he was a recipient of such sacrifices, and it was in his name that the Mexica waged war on other peoples. Hummingbirds are known by ornithologists to be quite warrior-like, which provides reason for the belief that hummingbirds were the souls of dead warriors. Males use their long, sharp bills as weapons to defend their territory, and they are belligerent and hostile to outsiders (Johnsgard, 1983: 56). In this context, the bill is also like the *xiuhcoatl,* Huitzilopochtli's weapon.

The hummingbird's bill is also a symbolic sacrificial tool. It can represent a thorn, which the Mexica used to pierce their own skin and draw blood, or it can represent *itztli,* an obsidian sacrificial blade, used to extract the hearts of captives. Sahagún describes the bill as "black, slender, small and pointed, needle-pointed, needle like" (1963, 11:24). The root of the Nahuatl word for hummingbird, *huitzilin,* is derived from *huitztli,* which means "spine, point, or thorn" (Bierhorst, 1985: 143), so the Mexica thought of the hummingbird as the "thorn bird". With its thorny bill, the hummingbird is the pollinator of two important thorny plants. It is the sole pollinator of the nopal cactus, which is part of the symbol of Mexico-Tenochtitlan (Gibson,

1968: 219-220). With the bat it pollinates several species of the agave, which is the source of the sacred drink *octli* (Grant and Grant, 1968: 24).

A variant form of *huitzilin* is *huitzitzilin* (Macazaga, 1982: 56), which includes the root of *itztli*. This makes the bill of the hummingbird an "obsidian thorn". There is a strong analogy between the narrow bill as it enters a flower and draws nectar from it, and the thin obsidian knife as it enters the body of a captive and draws blood from it. Coincidentally, most flowers pollinated by hummingbirds are red, because the birds have developed a color preference for red through natural selection (Grant, 1968: 77, 78) —a fact which reinforces the idea that flowers (of any color) "represented live or sacrificial blood" (Hunt, 1977: 92). These symbolic associations may have roots in other Mesoamerican cultures. The Olmec had jade perforators carved in the shape of hummingbirds, so that the beak would be the wounding instrument (Michael Coe, personal communication). The hummingbird even appears in the Maya *Codex Dresden* (5b, 6b) "with its beak boring out the blood of a victim" (Davies, 1973: 18; Seler, 1939: 41).

The hummingbird can represent the sacrificed heart of a captive, as well, which is held up to the sun still beating. The hummingbird is somewhat smaller than an adult's heart. Its high metabolism makes it very warm —up to 108°F (Skutch, 1973: 39), and the beating of its wings would be like the frenzied beating of a captive's heart during sacrifice. The Nahuatl word for heart is *yollotl,* derived from *ollin,* which in general means pulsating or undulant motion. One can apply this term to the beating of a heart, the sun's cyclical journey across the sky, or a bird's wingbeat. Interestingly enough, a bird listed directly after the hummingbird section in Sahagún is the *yollotototl,* or "heart-bird" (1963, 11:25):

> It lives there in [the province of] Teotlixco, toward the southern sea. It is quite small, the same as a quail. As for its being called *yollotototl,* the people there say thus: that when we die, our hearts turn into [these birds]...

Martín del Campo suggests that this is the species *Hedymeles ludovicianus,* but there is a chance that the *yollotototl* is simply another reference to the hummingbird. The myth of hearts transforming into these birds seems quite similar to the myth of the souls of warriors turning into hummingbirds. The identification of the *yollotototl* as a

hummingbird would affirm the analogy between hummingbirds and hearts.

The hummingbird's dual symbolism with Quetzalcoatl and Huitzilopochtli at first appears inconsistent, but may have its roots in a creation myth. After the birth of the four Tezcatlipocas, Quetzalcoatl and Huitzilopochtli collaborated to create the first fire, the first man and woman, and a half-sun (Nicholson, 1971: 398). This creation must have required the gods to perform autosacrifice. Since hummingbirds are metaphorically the tools of autosacrifice, they may have been symbolically connected to this act of creation.

Volatile III: The Dove

Representation and identification

The third volatile is the only volatile left unlabeled by Seler in his commentary on the *Codex Borgia* (1963, 2:242). Unfortunately, this bird appears in the *Codex Borgia* only on page 71 and nowhere else, so there are no other contexts to use in guessing its identity. It has brown plumage and black wingtips, and its beak is yellow and apparently raptorial. Although he does not label it in his commentary, Seler does refer to it in his article, "The Animal Pictures of the Mexican and the Maya Manuscripts". He writes that "[the third volatile] is distinguished by a very round head, which in fact is a characteristic of many species of falcons and hawks, but the beak is drawn clearly too long and as usual is conventionalized" (1939: 48). Seler believes that the *itztli* blades which project from its wings and head "allude to its nature as a raptorial bird" (1963, 2:242). The *itztli* blades may also be a mnemonic clue, pointing to this bird's possible identification as the *aitzcuauhtli,* or osprey, since the root for *itztli* is the second syllable in its name. The first syllable, *"a",* comes from *atl,* or "water", and this connection to water might explain the pairing of the third volatile with the Chalchiutlicue, the goddess of standing water.

Nicholson (1971), however, rejects the idea that the third volatile is a raptor. He refers instead to the *Codex Tudela,* in which the gloss above the third volatile reads "cocotzin (n. d.: 98v). *Cocotzin* is the honorific form of *cocotli,* which appears in the works Sahagún (1963, 11:48):

> It is small and squat, near the ground. The wings are spotted like *chia,* like quail, smooth. The legs are chili-red, short. And it is from its song

> that it is called *cocotli;* its song says *coco, coco...* When [its mate] dies, it always goes about as if weeping, saying *coco, coco...*

From the information in this entry, Martín del Campo proposes that the *cocotli* is *Scardafella inca,* the Inca Dove (1940: 405). Such an identification would agree with the *Codex Tudela's* illustration of this volatile as the smallest of the thirteen volatiles, with a innocuous nib instead of the predacious hooked beak.

Symbolic significance

Besides using it as food, the Mexica believed it had medicinal value; according to Sahagún, eating it "destroys one's grief, ...one's torment and affliction" (1963: 11:48). This superstition probably stems from the sounds of "grieving" that the dove makes.

Interestingly enough, *cocotli* can also be used to mean "throat" (Karttunen, 1983: 38). The reason for this may be that the Inca Dove was sacrificed in the same manner a quail is, by wringing its neck and pulling its head off. In fact, Father Diego Durán mentions two rituals in which doves were sacrificed at the same time as quail (1971: 227, 422). The Inca Dove is a small bird, somewhat resembling the quail; it may have been paired with the quail, the fourth volatile, because they were both regarded by the Mexica as sacrificial birds.

The third volatile looks entirely different in the *Codex Tudela* and the *Codex Borgia.* The most likely explanation for this difference is that the *Codex Borgia* does indeed portray the *cocotli,* but with a "conventionalized" curved beak, as Seler notes. Clearly this is the case with the quail, the turkey and the quetzal bird, on the same page, whose short and unmenacing beaks were traded for the uniform raptorial beak pictured.

Volatile IV: The Quail

Representation and identification

In the *Codex Borgia,* the fourth volatile has gray plumage with a pattern of white circles on the wings and around the eye, as well as the uniform raptorial beak, and Seler identifies it as the *zolin,* or quail (1963, 2:242). The corresponding depiction in the *Codex Tudela* is similar but lacks the large, conventionalized beak, and it, too, is labeled

"zolin" (n.d.: 97v) Sahagún describes the *zolin* and two of its variations —*tecuzolin* and *ouaton*— writing extensively on its appearance, traits and habits (1963, 11:49):

> [*Zolin*]
> Its bill is pinted, ashen green. Its breast is spotted with white; its wings are called chia-spotted. It is a runner...
>
> [*Tecuzolin*]
> ...It is large, smoky-breasted, well spotted, much spotted, crested.
>
> [*Ouaton*]
> ...It is small, quite ashen, only a little spotted...

With this information, Martín del Campo states that the term *zolin* "certainly designated all quails", although the *tecuzolin,* whose name means "lordly quail" (Michael Coe, personal communication), is probably the male of the species *Cyrtonyx montezumae,* the Montezuma Quail (1940: 405). This species is clearly marked with the spots that the depictions in the codices suggest (Peterson and Chalif, 1974: pl. 8).

Symbolic significance

The quail is calendrically linked to the sun god, Tonatiuh. The Lord of the Day paired with the quail is Tonatiuh, and the fourth heaven, which the quail oversees, is the heaven of the sun (Nicholson 1971: Table 2). In addition, the day name of Tonatiuh is Four Ollin, and since the quail is the fourth volatile, it governs over that day, as well.

The most important connection between quail and sun is illustrated by the central scene of the page of the thirteen volatiles in the *Codex Borgia* (1963: 71). This picture shows a sacrificed quail, with blood streaming from its beheaded body into the mouth of Tonatiuh. Like human sacrifice, the sacrifice of quail gave energy to the sun to continue its movement through the sky. Although human sacrifice was of much greater worth, it was also highly sacred, and only priests and high officials could perform one. On the other hand, anyone could purchase or raise quail for sacrifice; in this way, even the humblest household could make an offering to the sun. Sahagún tells of many rituals that required quail sacrifice, and he even describes the act (1981, 2:198):

> ...when they twisted the necks of small birds... They cast [the body] there before the devil. There the body of the small bird lay beating its wings.

Here the sacrificed quail is equivalent to the sacrificed human heart, which was held up to the sun, still beating and streaming blood, until it stopped. The name *zolin* might even be derived from *ollin,* the term for the pulsating motion of the heart.

According to Seler, the conspicuous spots on the quail represent the stars of the night sky, which seems odd, given its obvious solar symbolism. Seler explains, however, that the pictured beheading of the quail for Tonatiuh is like the beheading of Coyolxauhqui, the lunar goddess, for Huitzilopochtli (1963, 2:238). That is, the death of the starry-plumed quail symbolizes the defeat of night in the face of the dawning sun.

Volatile V: The Raven or the Black Eagle

Representation and identification

The identity of the fifth volatile is ambiguous and controversial. In the *Codex Borgia* (1963: 71), this bird is pictured with black plumage. Its head feathers project outwards, as if in a crest, and *itztli* blades surround the bird, attached to its wings and head. Although most of the bird's head is effaced in this representation, the same bird appears again, in full, on page 18, where it is shown with a yellow raptorial beak. Seler wants to identify this bird as the *cuauhtli,* or eagle, which is described by Sahagún (1963, 11:40):

> The eagle is yellow-billed — very yellow; the bill is yellow, very yellow. The bill is thick, curved, humped, hard. The legs are yellow, an intense yellow, very yellow, exceedingly yellow... The claws are curved, hooked. The eyes are like coals of fire. It is large, big... It is ashen, brown...

Even though *cuauhtli* may have been a broad term for "eagle", Sahagún himself writes that it refers specifically to the Golden Eagle (1963, 11:40). The fifth volatile does indeed have the intensely yellow markings Sahagún mentions, but judging from the other depictions of birds in the *Borgia,* the yellow beak and legs must be another artistic convention rather than a diagnostic attribute. Furthermore, its fea-

thers are completely black, not ashen or brown like the plumage of a Golden Eagle.

Nevertheless, the sharp *itztli* blades indicate that, although the fifth volatile is not the Golden Eagle, it might still be a raptor (Seler, 1963, 2:242). The apparent crested head feathers of the fifth volatile are a frequent attribute of raptorial birds, as well. One of the raptors described by Sahagún is the *itztlhotli,* which includes the root of *itztli.* This, along with its dark plumage, make it a candidate for the fifth volatile (Sahagún, 1963, 11:45):

> . . .It is named "reed falcon" or "obsidian falcon" because its bill is quite long and narrow like an obsidian point. Its feathers are quite smoky, dark. And its tail is somewhat long, white mingled [with black].

Martín del Campo unfortunately does not mention the *itztlhotli* in his interpretation. Nevertheless, this bird may well be one of two known great raptors. Though rare, the Solitary Eagle has slightly crested head feathers and completely black plumage, except for a white band on the tail (Peterson and Chalif, 1973: 32). Another rare bird is the Black Hawk-eagle, which has touches of white on its underside, and which also has a prominent crest (Edwards, 1972: 37). Even though these birds are rare now, they may have been plentiful before the Conquest and easily observed.

In the *Codex Tudela,* too, the fifth volatile has completely black plumage, but it possess a large curved bill instead of a raptorial beak, and the Nahuatl gloss above it identifies it as the *cacalotl* (n.d.: 98v, 99r). The description Sahagún offers emphasizes the darkness of the *cacalotl,* which matches the coloring of the fifth volatile: "It is really black, really charcoal-colored, a well-textured black: very black. Its feathers glisten" (1963, 11:43). Martín del Campo identifies the *cacalotl* as *Corvus corax,* the Common Raven (1940: 402). The raven is a viable choice, since its habitat is in the highlands, and it is widespread, occurring as far south as Nicaragua (Peterson and Chalif, 1973: 162), and the "crest" shown in the *Codex Borgia* may represent the raven's conspicuous ruffled collar.

As in the case of the third volatile, the conflict between the *Codex Borgia* and the *Codex Tudela* poses a problem. Is the fifth volatile one distinct bird —a raven— simply represented in two different manners, or do the codices depict two different birds altogether? In all likelihood, the *Codex Borgia* does depict a raven, simply using conventions such as the yellow markings and the raptorial beak that

appears on the other birds. That notwithstanding, the possibility still exists that, with its *itztli* blades and raised crest, the fifth volatile is a raptor such as the Black Hawk-eagle.

Symbolic significance

The upper register on page 18 of the *Codex Borgia* is the only place this bird appears, other than on the page of the thirteen volatiles. In that scene, the fifth volatile and the turkey are shown on either side of the moon, suspended or descending in the night sky. The turkey is holding a severed arm in its beak, and the fifth volatile is touching a large *itztli* blade. The *itztli* blade, besides indicating the possible identity of this bird as *itztlhotli,* is a symbol of Tezcatlipoca, who often appears as a deified *itztli* knife. Tezcatlipoca is also associated with the color black and with the night. It is highly possible, then, that the fifth volatile, being a black bird and associated in this scene with the night, is a representative of Tezcatlipoca.

Volatiles VI and X: The Owls

Representation and identification

As with the two hummingbirds, the codices portray two varieties of owls among the thirteen volatiles. Unfortunately, the sixth volatile is partially effaced in the *Codex Borgia,* and it does not appear again in the codex. Its ruffled head feathers project outward, and *itztli* blades are attached to these feathers and to the wings. The tenth volatile clearly has "horns" or "ears" and is depicted here with a skull-face and ear ornaments. This owl appears many times throughout the *Codex Borgia,* and except on pages 71 and 14, it is pictured with the normal face of an owl.

The *Borgia* representations of these two owls have two unusual attributes in common. Firstly, their faces are depicted in full frontal view, whereas all other birds are shown in profile, without exception. The *Codex Borbonicus,* although inconsistent, also depicts the heads of owls in this fashion. Secondly, the owls' heads are tilted to one side, at about a forty-five degree angle. Perhaps the reason for these conventions is that the face of an owl is shallow, and a profile view would not show good detail. In addition, this representation may show the most common view of an owl —when someone encounters an owl in nature, the owl regards him as a threat and watches him

intently, only allowing him a frontal view of its head. Also, the owl has asymmetrical outer ears which help it locate the source of sounds, so that it constantly cocks its head from side to side in order to listen better to the intruder (Angell, 1974: 17).

Since there are obvious physical differences between the sixth and tenth volatiles, they must be distinct birds. Seler simply labels the sixth volatile *tecolotl* and the tenth *chicuatli* (1963, 2:242, 243). Sahagún includes in his writings revealing descriptions for both these birds (1963, 11:42, 46):

> [*Tecolotl*]
> It is round, like a ball. The back is rounded. The eyes are like spindle whorls; shiny. It has horns of feathers. The head is ball-like, round; the feathers thick, heavy... It feeds by night, because it sees especially well in the dark. It has a deep voice when it hoots; it says, tecolo, tecolo, o, o.
>
> ...
>
> [*Chicuatli*]
> It has thick feathers, eyes like spindle whorls, a curved bill. It is unkempt, fluffy. Its feathers are ashen, blotched like a quail's. It is round-headed, stubby-tailed, round-winged. The eyes shine by night; they are weak by day. It is a night traveler which sees at night; it feeds, it lives by hunting...

From these descriptions, it appears that Seler has transposed the correct names for the two owls. The sixth volatile, with its ruffled feathers, should be the "unkempt, fluffy" *chicuatli,* and the tenth volatile, which has "horns of feathers", should be the *tecolotl.* These are, in fact, the identifications which appear in the gloss above these birds in the *Codex Tudela* (n. d.: 97v, 98).

Martín del Campo reasons that Sahagún's description of the *chicuatli* indicates the species *Tyto alba,* the Common Barn Owl (1940: 404). Corroborating this, Nicholson identifies the fifth volatile as a Barn Owl (1971: Table 2). Martín del Campo does not comment upon the *tecolotl,* and Dibble and Anderson suggest that it is a generic term for owl (Sahagún, 1963, 11:42). Nevertheless, the *tecolotl* is described as having horns, which limits the possibilities to a small group of horned owls, the only likely candidates of which are the Screech Owl and the Great Horned Owl (Peterson and Chalif, 1973). The Great Horned is twice as tall and several times as heavy as the Screech Owl, and its call is a "throaty hoot", whereas the Screech Owl's call is a varied "assortment of hoots, whistles, and high-pitched

cackles" (Angell, 1974: 27, 33). The "tecolo, o, o", for which the *tecolotl* is named, is more likely the consistent hoot of the Great Horned, rather than the highly varied call of the Screech Owl. The tenth volatile is probably the Great Horned Owl for the further reason that it is much larger and more conspicuous, although this identification is still speculation.

Symbolic significance

It seems slightly odd that the owl would be a bird of the day, since it is basically nocturnal. Nicholson states that the Lords of the Day paired with the sixth and tenth volatiles are Mictlantecuhtli and Tezcatlipoca, respectively, both of whom are also lords of the night (1971: Table 2). The owl appropriately appears on page 14 of the *Codex Borgia* with Mictlantecuhtli in his role as fifth Lord of the Night. Owls also appear on page 42, in Chiuhcuauhnmictlan, the deepest level of Mictlantecuhtli's underworld domain, and on page 52, an owl is shown inside a temple of bones, drinking the blood of a sacrificed captive which Mictlantecuhtli is holding. Not seldom do owls appear in the codices, such as the *Fejervary-Mayer,* with skull-heads, connecting them to the skull-headed god Mictlantecuhtli. The Mexica thought of the owls as messengers of the underworld, and to encounter one was a bad omen, as illustrate the following descriptions from Sahagún's fifth volume, on omens (1979, 5:161, 163):

> They said that when [the tecolotl] was heard, it signified death or sickness; it was an omen of death.
>
> . . .
>
> It was thought that this [chicuatli] was the messenger, the envoy of Mictlan tecutli and of Mictecaciuatl. It knew the land of the dead... because it was the one who called and summoned people for Mictlan tecutli and Mictecaciuatl.

The owl also has strong symbolic connections with Tezcatlipoca, who is not only a god of the night, but he can also roam freely between our world and the world of the dead. The conspicuous *itztli* blades on the sixth volatile are symbols of Tezcatlipoca. Furthermore, one of Tezcatlipoca's epithets is "The Night, the Wind", a *difrasismo* which refers to his imperceptibility (Sahagún, 1969, 6:1). The owl is also imperceptible, since it can hide in the darkness, and since its specialized fringed feathers allow its nearly soundless flight before striking prey (Angell, 1974: 19).

Tezcatlipoca means "Smoking Mirror" in Nahuatl, and when this god appears in the *Codex Borgia,* he is represented with an obsidian mirror pectoral, and obsidian mirrors in his head and at his foot. Although they are dark, such mirrors have glassy surfaces and can reflect light very well; the same can be said of the black eyes of owls, which can eerily reflect the beam of a flashlight or the light of a fire. Sahagún's description of the owls' eyes as "spindle whorls; shiny", recognizes this attribute. Nocturnal animals such as the owl have large eyes, with a special layer of tissue lying behind the retina called the *tapetum lucidum,* which reflects any light entering the eye back over the retina (Sanders, 1988: 144). Not only does this layer allow the retina to gather as much light at possible, so as to see better in the dark, but it also reflects light back out of the eye, as a mirror, often making the owls eye's appear to glow in the dark (Sanders, 1990: 103).

Volatile VII: The Butterfly

Representation and identification

The depiction of the seventh volatile on page 71 of the *Codex Borgia* is highly stylized, though its symmetrical shape and antennae still identify it as a butterfly. The wings and body are unarticulate and painted white with red spots, and where other volatiles have *itztli* blades surrounding them, the butterfly has feathers attached to its wings.

It is interesting to note that Sahagún does not categorize the butterfly with birds, as the Mexica might have done. Rather, he lists it among other insects. Besides supplying a general description, he gives brief notes on eight varieties of butterfly, yet no variety of butterfly is described as having the red spots of the seventh volatile. The general description is nevertheless important to the butterfly's symbolism (1963, 11:49):

> ...It is fuzzy, like fat; winged. Its wings are twofold... It is a flyer, a constant flyer, a flutterer, a sucker of different flowers, and a sucker of liquid. It is fuzzy. It trembles, it beats its wings together, it constantly flies...

Symbolic significance

Much of the butterfly's symbolism has to do with flowers. Not only do butterflies land on flowers and drink their nectar, but the

Mexica conceived of them as "moving flowers". Evidence is given by Sahagún, who apparently groups the ornate varieties of butterflies under the heading *xochipapalotl,* or "flower butterfly" (1963: 11:95):

> Some are large, some small. Many kinds of colors are on them, so that they are varicolored, much like flowers, of very intricate design, and truly sought after, truly wonderful. They are of intricate design, sought after, flower-like.

The butterfly appears in the iconography of the two flower deities, Xochipilli, the "Flower Prince", and Xochiquetzal, the goddess of love. Xochipilli, the Lord of the Day paired with the butterfly (Seler, 1963, 2:242), is consistently depicted with a butterfly design painted around his mouth. Throughout the *Codex Borgia,* but most clearly on page 9, stylized butterflies are sucking nectar from the flowers in Xochiquetzal's headdress (see fig. 3a). Her lunar nose ornament, too, is modified to make it butterfly-like.

The butterfly symbol and the *ollin* day-sign symbol are very much alike. This *ollin* symbol, which is the visual representation of the concept of motion, is pictured in two different ways in the *Codex Borgia* (see figs. 3b and 3c). One example of the *ollin* symbol which bears remarkable resemblance to the butterfly symbol. The similarities are obvious in the *Codex Magliabecchiano* (1903). The "mantle of the butterfly" on page 10 shows a stylized butterfly with four squarish wings and a large eye in the middle of its body (see fig. 3d). The *ollin* day-sign on page 13 also has four squarish appendages and an identical eye in the center (see fig. 3e). Furthermore, the two bulbs on either side of the *ollin* symbol, the triangular point on top, and the pendant on the bottom are all repeated in the butterfly symbol on page 9 of the *Borgia.*

¿Why should the butterfly and the *ollin* symbols appear so similar? Michael Coe (personal communication) suggests that since earlier *ollin* and butterfly symbols were quite unlike each other, their later similarity is a product of convergent evolution. That is, at some point the Mexica must have mentally linked the two and then began drawing their symbols more and more alike. There is good reason for the butterfly and *ollin* to be linked ideologically. The butterfly exemplifies *ollin,* pulsating, undulant movement. As Sahagún writes, it is a "constant flier", which "trembles" and "beats its wings together". Like the hummingbird, it sucks the "blood" of flowers for sustenance to fly, just as the sun sucks the blood of sacrificed humans in order sustain its *ollin,* its daily movement across the heavens.

The butterfly is associated with several important deities besides Xochipilli and Xochiquetzal. Seler notes that the Lord of the Day paired with the butterfly can also be Centeotl, the "Maize God" (1963: 242), and Nicholson lists the Lord of the Day as Tonacatecuhtli, whose name means "The Lord of Our Flesh", which is a poetic reference to maize (1971: Table 2). As a pollinator, the butterfly may have been highly important in the success of corn crops, which were the staple of Mexica society.

By way of its name, the butterfly is connected to Itzpapalotl, or the "Obsidian Butterfly". This macabre and poorly understood deity has clawed hands and feet and a skull for a head. Nicholson classifies Itzpapalotl as part of the Teteoinnan complex, a group of female deities (1971: 420-421). It is possible that Itzpapalotl is the same voracious earth monster, Tlaltecuhtli, that emerges from the butterfly-inspired *ollin* symbol in the center of the great Calendar Stone, clutching hearts in its fists (see fig. 4a). Reliefs of the earth monster are characteristically carved on the underside of many monuments, since that side faces the earth (Townsend, 1979). Analogously, butterflies are sometimes painted on the bottom of ceramic bowls (Franco, 1959). One stone relief carving clearly shows Itzpapalotl, inverted like the butterflies in Xochiquetzal's headdress, grasping a heart in each hand, just as the earth monster of the Calendar Stone (see fig. 4b). Seler comments that Itzpapalotl is the Chichimec goddess of the earth (*Codex Borgia,* 1963: 11), which would support the connection between Itzpapalotl and the earth monster. Furthermore, Sahagún offers literary support in the Song of Teteo innan (1981, 2:226):

> The goddess on the barrel cactus
> Is our mother
> The obsidian butterfly [itzpapalotl].
>
> Let us find her
> In the ninefold steppes
> She'll be feeding on deer hearts
> She our mother
> She the goddess of the earth [tlaltecuhtli].

This passage basically equates the deities Itzpapalotl and Tlaltecuhtli. This may simply mean that Itzpapalotl is one of many earth goddesses, or perhaps that she is an aspect of a single Tlaltecuhtli.

The butterfly's strong connection to Xochipilli and Centeotl, both young gods of vegetation, also links it to Xipe Totec, "Our Lord the

Flayed One". This god was highly symbolic of spring, and during his feast, warriors would impersonate him and wear the flayed skins of human sacrifices, which 'signified that when spring arrives, the earth must cover itself with a new coat of vegetation" (Caso, 1953: 51). These Xipe impersonators were honored with garlands of flowers (Sahagún, 1963, 1:40). The priests wore flayed skins for weeks, while they rotted, and the eventual removal was also symbolic of renewal. This is like the metamorphosis of abutterfly, which encases itself in a skin-like chrysalis, to be reborn weeks later, in beautiful colors like the flowers of spring.

Volatile VIII: The Eagle

Representation and identification

The eagle is by far the most frequently illustrated bird in the *Codex Borgia.* Whether only its head is depicted or it appears in full figure, the conventions of its representation are consistent. Its raptorial beak and its legs are yellow. Its plumage is painted in a pattern which Seler eloquently describes as "chestnut and white transverse stripes" (1963, 2:242), although the overall effect produced is a mottled gray. It has the same crested head feathers as the fifth volatile. The *itztli* blades which surround the eagle on page 71 appear only in full-figure representations; the head shown by itself never includes them.

Other codices in the *Borgia* Group, such as the *Fejervary-Mayer* and *Vaticanus B* contain very similar representations of the eagle, with crested head and mottled plumage. Mixtec sources, too, show the same conventions. The eagle in the *Codex Borbonicus* is inconsistently depicted, but recognizably the same bird. The *Codex Tudela* (n. d.: 98), on the other hand, shows for the eighth volatile a raptorial bird without a crest and with even greenish plumage, and the gloss above it reads *"tlotli",* which is Nahuatl for "falcon" (Martín del Campo, 1940: 402). In this case, the *Codex Tudela* depicts a bird completely different from the bird in the *Codex Borgia,* not simply a different representation of the same bird. The eighth volatile in the *Borgia* must be an eagle; the only question, however, is what kind of eagle it is.

Many scholars believe the Mexican day-signs to be derived from the Maya calendar. The monkey, the jaguar, and the King Vulture, three of the twenty day-sign symbols, are certainly indigenous to the Maya tropics, not found naturally in the Central Highlands of Mexico.

71. **84. EL SOL, LA LUNA, EL LUCERO DEL ALBA Y LOS TRECE PÁJAROS (LAS HORAS DEL DÍA)**

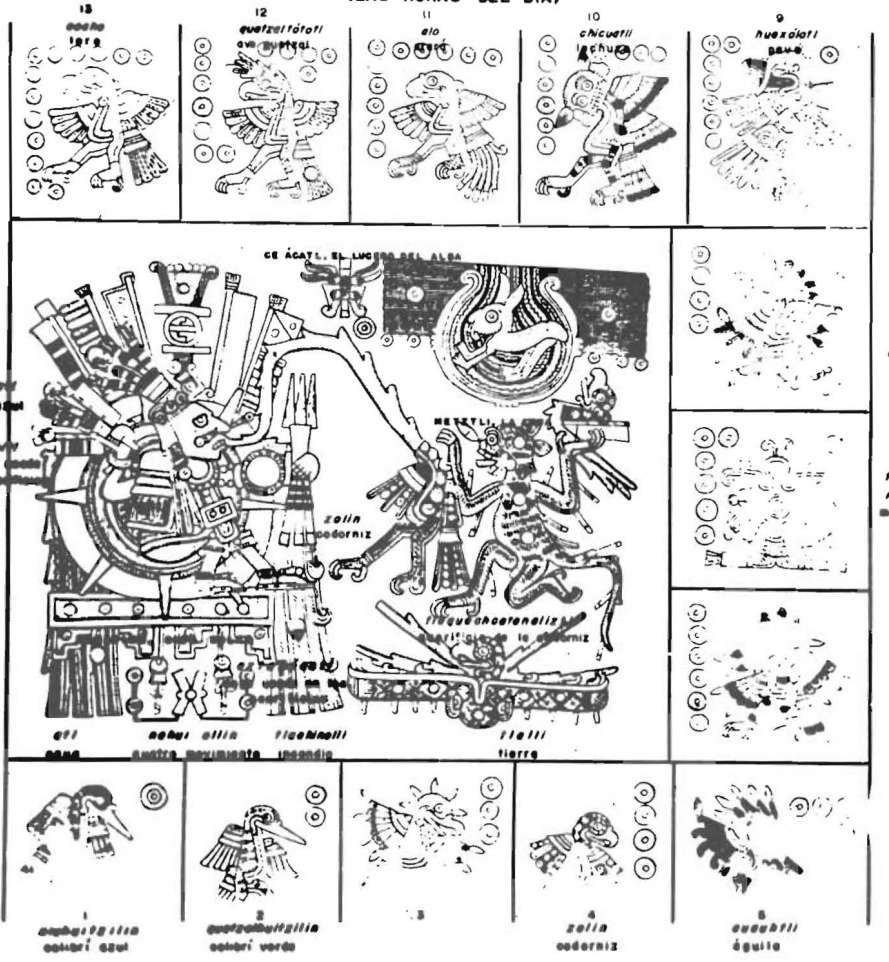

Figure 2: the 13 volatiles. Codex Tudela. After Nicholson (1971)

Fig. 3a: Xochiquetzal with butterflies Codex Borgia p. 9

Fig. 3b: *ollin* symbol Codex Borgia

Fig. 3c: *ollin* symbol Codex Borgia

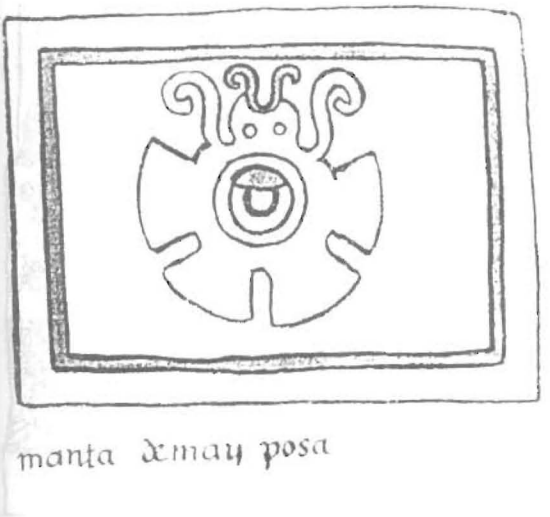

Fig. 3d: Butterfly mantle Codex Magliabecchiano p. 10

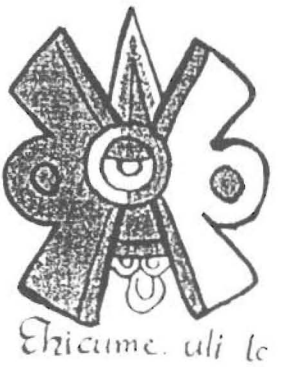

Fig. 3e: *ollin* day-sign Codex Magliabecchiano p. 13

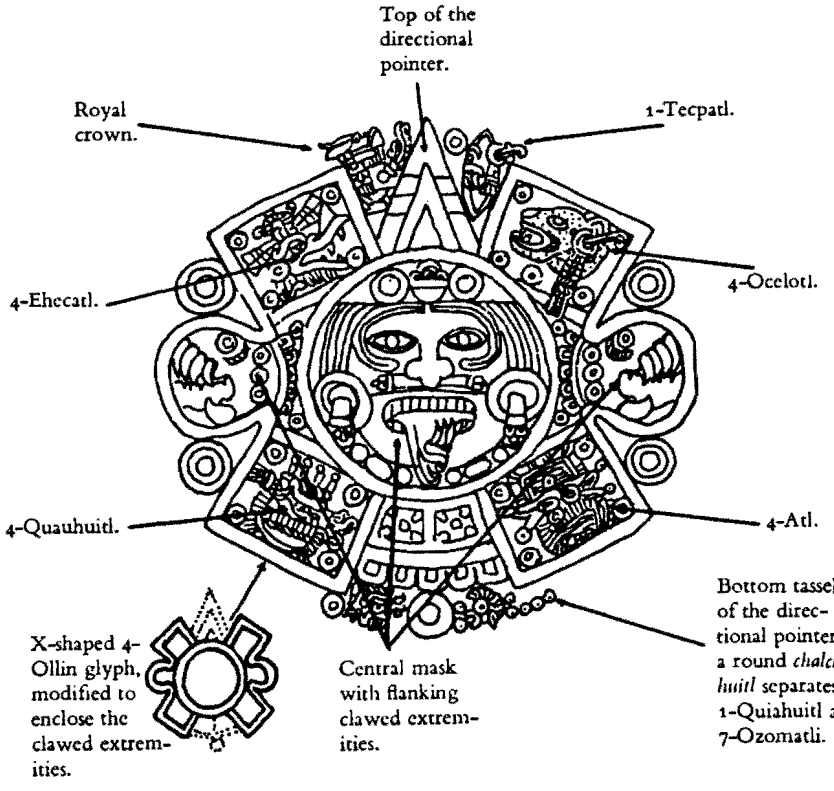

Fig. 4a: The earth monster (Calender Stone) after Townsend (1979)

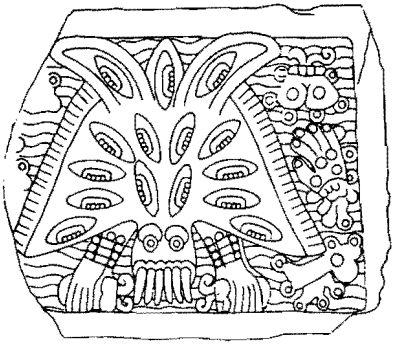

Fig. 4b: Itzpapalotl after Beutelspacher (1989)

Fig. 4c: the Teocalli after Townsend (1979)

It is possible, then, that the eagle, which is both the fifteenth day-sign and the eighth volatile, is the Harpy Eagle from the rain forests of Guatemala and Chiapas. Seler states that the erect crest shown in the codices "suggests the Harpy Eagle... on which the elongated feathers at back of head forming a long, wide erect crest are very conspicuous" (1939: 44). In spite of this, the Harpy Eagle is probably not the eagle of the *Codex Borgia.* Its beak is black, not yellow, and its plumage is not mottled; the upper chest, wings, and tail feathers are a uniform dark gray, and the lower chest is white (Burton, 1983: 57). These marks are quite inconsistent with the *Borgia* depiction.

Seler also suggests that the mottled pattern might indicate, if not the Harpy Eagle, a member of the genus *Spizaetus* (1939: 44), possibly an immature specimen of *Spizaetus tyrannus,* the crested Black Hawk-eagle. As mentioned in the discussion of the fifth volatile, the adult Black Hawk-eagle has very dark plumage, but the immature form has streaked brown and white plumage, which is much like the eighth volatile's "chestnut and white" pattern in the *Codex Borgia.* If this is the correct bird, the fifth and eighth volatiles could simply be the younger and older versions of the same bird. All the same, the Black Hawk-eagle is a rain-forest dweller which seldom ventures into the highlands (Peterson and Chalif, 1973: 36). The great significance that the Mexica placed on the eagle seems to point instead to a more common species, one indigenous to the Valley of Mexico.

As with the third and fifth volatiles, the *itztli* blades surrounding the eagle may have been a mnemonic clue to its name. Perhaps for this reason, Seler labels the eighth volatile *itzcuauhtli,* literally "obsidian eagle" (1963, 2:242). Sahagún's account of this bird is quite useful (1963, 11:41):

> It is large... The bill is yellow; its legs are yellow. It is called *itzcuauhtli* because the feathers of its breast, of its back are very beautiful; they glisten as if blotched with gold... Its wings, its tail are blotched with white... they are somewhat golden like the feathers of a falcon. And it is called *itzcuauhtli* because it is a great bird of prey. It prays on, it slays the deer, the wild beasts.

Martín del Campo uses this description to identify the *itzcuauhtli* as *Aquila chrysaëtos,* the Golden Eagle (1940: 401). It makes sense that the Golden Eagle would be the eighth volatile, since it was indigenous to the Central Highlands of Mexico, and even today it is not considered rare in that region (Peterson and Chalif, 1973: 35). The general term *cuauhtli* (see above) was identified by Sahagún himself

as the Golden Eagle, as well. It is possible, then, that both *cuauhtli* and *itzcuauhtli* are names for this species.

The Golden Eagle does not have a crest, nor is its plumage mottled gray like that of the eagle in the *Codex Borgia.* However, the less conventionalized, more naturalistic representations of the eagle in the post-Conquest sources, such as the *Codex Borbonicus* (1899: 11), the *Codex Magliabecchiano* (1903: 8), and the *Codex Mendoza* (n. d.) clearly display an eagle with brown plumage and yellow beak and legs, unmistakably the Golden Eagle. Possibly the most authoritative depiction of the eagle, although unfortunately without color, is the image carved on the back of the Teocalli of Sacred Warfare, which shows the symbol of Mexico-Tenochtitlan (see fig. 4c). Not only is the eagle crestless, but it also perches atop a cactus, identifying it as a bird native to the arid highlands.

The troubling conflict between the depiction of the eagle in the *Borgia* Group and depictions from other sources leads to the following hypothesis: The codex prototypes of the *Borgia* Group came from a southern region where the Black Hawk-eagle is indigenous. When new codices were made, the depiction of the immature Black Hawk-eagle was copied faithfully and passed on. These new codices made their way into the Central Mexican Highlands, duplicated by Mixtec and Aztec copyists, who continued to follow the traditional depiction of the Black Hawk-eagle as a model, even though that eagle did not live in the highlands. It was simply understood that this conventionalized image represented "the eagle" —i. e., the eagle with which they were familiar, the Golden Eagle.

Symbolic significance

The importance of the eagle in religious symbolism cannot be emphasized enough. To the Mexica, it was the greatest and most powerful creature of the sky, and it could "kill whatever kind of bird flies in the air" (Sahagún, 1963, 11:41). The eagle, then, represented supremacy, and its predatory nature also gave in the connotations of war and sacrifice.

The eagle's supremacy in the air was matched only by the jaguar's supremacy on land, and the two are often paired. In the *Codex Borbonicus* (1899: 11), for example, the eagle and the jaguar are represented as warriors, with rope on their backs for tying the limbs of captured enemies. They are shown together in the *Codex Borgia,*

as well, with sacrificial blood flowing from their decapitated bodies (1963: 50). In addition, the throne of the Aztec emperor was made of an eagle-skin mat and a jaguar-pelt backrest (Sahagún, 1981, 2: 123). The eagle and jaguar are symbols of power, but in a more specific sense, these two animals signify the two warrior orders of the Aztec state that provided captives for sacrifice to the sun god. The Jaguar Order was loyal to Tezcatlipoca, the god most associated with night, whereas the Eagle Order affiliated itself with Huitzilopochitli, who was a solar deity (Soustelle, 1964: 43). The eagle is depicted in the *Codex Borgia* in two places (1963: 2, 50) with a blue-tipped beak. According to Seler, blue nose ornaments can be "a familiar badge of the spirit of the dead warrior" (1939: 45), which fits in well with the eagle as a symbol of warriors.

The eagle and the jaguar also appear in Sahagún's story of the creation of the sun and the moon, after Nanauatzin and Tecuciztecatl throw themselves on the blazing pyre and become the sun and the moon, the eagle and the jaguar also leap into the flames (Sahagún, 1953, 7:6). This can be interpreted as a symbolic repetition, where the eagle represents the sun, and the jaguar symbolizes the moon.

The eagle's affiliation with the sun is supported by the light imagery in Sahagún's descriptions. The feathers, "blotched with gold", and the yellow legs and bill liken the Golden Eagle to the brilliant golden disk of the sun, which is painted bright yellow in the *Codex Borgia.* The rising sun was called *cuauhtehuanitl,* or the "ascending eagle", while the setting sun was *cuauhtemoc,* the "descending eagle" (Caso, 1958: 33).

The eagle appears in an important motif in the *Codices Fejervary-Mayer* (n. d.: 42), *Vaticanus B* (1896: 27), and *Borgia* (1963: 52). In this motif, and eagle and a snake have a rabbit or a lizard in their jaws, and they appear to be fighting over it. Seler proposes that the rabbit (or the lizard) symbolizes the moon, and the snake is a "celestial serpent" (1963, 1:57). Since the eagle is the avatar of the sun, this motif probably represents some sort of astronomical occurrence, such as sunrise and the fading of the moon's brightness.

The eagle, with its solar connotations, is affiliated with the East, the direction of the rising sun (Nicholson, 1971: 405). As the symbol of the fifteenth day-sign, the eagle is also associated with Xipe Totec (Seler, 1939: 45), who is the Tezcatlipoca of the East. Nevertheless, the eagle's chief directional orientation is the North, and it appears in the *Codices Fejervary-Mayer* (n. d.: 1), *Vaticanus B* (1896: 17), and *Borgia* (1963: 50), sitting on top of the Tree of the North. This

is the same, famous image as is shown on the Teocalli of Sacred Warfare, the symbol of Mexico-Tenochtitlan

Volatile IX: The Turkey

Representation and identification

Because of the conspicuous wattle above its beak, it is easy to identify the ninth volatile as a turkey, although determining which variety of turkey is more complex. Its depiction on page 71 of the *Codex Borgia* is so small, and it is more helpful to work from the large, highly detailed version on page 64. In this picture, the turkey's head is painted red, with blue circles, and the scalloped outline of the head suggests featherless skin. A long wattle with a blue tassel hangs in front of the beak, which is black except for a white tip. The wings appear to be painted a mottled pattern of bluish gray and white. It wears loose medallions on its plumage and a necklace of medallions around its neck, and it has the stylized chest "beard" of a turkey. This depiction is inconsistent with those of the *Codex Borbonicus* (1899: 14, 15) and the *Codex Tudela* (n. d.: 98), in which the ninth volatile has a blue head with red spots and green body feathers.

Seler labels this bird ***huexolotl*** (1963, 2:243), the male turkey (Sahagún, 1963, 11:53), and the gloss above the *Tudela* depiction reads "chalchi totoli", a misspelling of *chalchiuhtotolin,* which means "jade turkey" (n. d.: 98). Although no entry appears for either of these birds *per se,* Sahagún writes a very long entry for the *totolin,* a general term for turkey (1963, 7:53):

> It is a dweller in one's home, which can be raised in one's home, which lives near and by one. The feathers are thick, the tail rounded. It has wings; it is heavy, not a flyer. It is edible. It leads the meats; it is the master. It is fat, savory... Some turkeys are smoky, some quite black, some like crow feathers, glistening, some white, some ashen, ash-colored, some tawny, some smoky... The stalky neck has a necklace, a neck-coral. The head is blue; it is dewlapped; it has a dewlap. The turkey hen is of average size, of medium size, low, low-backed. She has a necklace; she is coral-headed, with a coral[-colored] head.

Martín del Campo identifies this bird as *Meleagris gallopavo,* the Common Turkey (1940: 408), which has the dewlap and "necklace" which Sahagún mentions. This is the species which the *Borgia* representation illustrates, as well. The other two codices probably show

instead the Ocellated Turkey, *Agriocharis ocellata,* whose bright blue head and iridescent green plumage is unmistakable in the *Codex Tudela.* This species, which today lives in the Yucatan Peninsula, has red warts on its head, only a small wattle above the beak, and lacks the dewlap or chest "beard" of the Common Turkey (Peterson and Chalif, 1973: 48). It appears, then, that the codices present two individual varieties of turkey, but in the same symbolic context.

Symbolic significance

The term *chalchiuhtotolin,* or "jade turkey", is a known epithet of Tezcatlipoca's (Nicholson, 1971: Table 3), and the codices reflect this symbolism. On page 10 of the *Codex Borgia,* the turkey appears as patron of the eighteenth day-sign, Tecpatl, "Flint-knife". This Tecpatl sign has an eye and a mouth, which designate it as a symbol of Tezcatlipoca. The *Codex Borbonicus* (1899: 17) actually shows Tezcatlipoca in the guise of a turkey. His head is coming out of the bird's beak, and the smoking mirror above his ear is undeniably his insignia. Furthermore, the turkey is shown in the *Codex Vaticanus B* (1896: 65) with smoke emerging from its head, again indicating Tezcatlipoca. It is interesting to note that the domestic *totolin* is described by Sahagún as living "near and by one", since another of Tezcatlipoca's appellatives is "Lord of the Near, of the Nigh" (Sahagún, 1969, 6:1). Although these phrases are not similar in the original Nahuatl, the idea of proximity is still conveyed, tying the bird and the god together.

The medallions which the turkey wears in the *Codex Borgia* appear to be stylized quincunx signs, indicating preciousness, especially precious stone or jade. This reinforces the idea that this is a *jade* turkey. Besides indicating jade, chalchiuhuitl can also refer to water, since it is blue-green. The chalchiuhtotolin is patron of the trecena 1 Atl, or "One Water", for that reason (*Codex Borgia,* 1963: 64). The turkey's plumage is even painted like the depiction of water, with black and blue-gray stripes.

In several ways, the turkey is connected to Quetzalcoatl, too. The *Codex Fejervary-Mayer* shows a turkey sitting across from Quetzalcoatl, who is holding a staff with the Ehecatl mask attached to it (n. d.: 6). Quetzalcoatl is paired with the turkey as ninth Lord of the Day in the *Codex Borbonicus,* as well (Nicholson, 1971: Table 2). As the ninth volatile, the Turkey even presides over the day 9 Ehecatl,

or "Nine Wind", which is the name-day of Ehecatl, the wind god aspect of Quetzalcoatl.

Because of this affiliation between the turkey and Quetzalcoatl, there is a possibility that the head of the turkey is the model for the Ehecatl mask, described by Caso as "a red mask in the form of a bird's beak, which in some representations is also set with the fangs of a serpent" (1958: 22). The beak of the mask is straight and pointed, probably out of convention. There is also an appendage above the beak, sometimes drawn with a scalloped outline, as if it were rubbery or flexible, which possibly represents the fleshy wattle of a turkey. There is no way to prove this point, however, and it can only be offered as a hypothesis.

Volatiles XI, XII and XIII: The Tropical Birds

Representation and Identification

The last three volatiles are grouped together here because they are all exotic from the rain forests of Guatemala and much of the symbolism linked to each bird is common to all. The artist of the *Codex Tudela* (n. d.: 98) painted these three birds in bright colors: the eleventh volatile is green, the twelfth is red, and the last is yellow. Above their respective pictures are the glossed Nahuatl words "quetzal tototl", "chiconcuetzali" and "toznene". The *Codex Borgia* and the *Codex Borbonicus,* on the other hand, depict these birds in a different order, with the red bird as the eleventh volatile, the green bird as the twelfth, and the yellow as the thirteenth. Seler identifies them respectively as the *alo,* the *quetzaltototl* and the *cocho.*

A description of the *alo* appears in Sahagún's work (1963, 11:23):

> [*Alo*]
> It lives especially in [the province of] Cuextlan, in crags and in the dense forest. It is tamable. Yellow, curved is its bill; rough are its feet, with callosities... Flaming red are its eyes; yellow are its breast [and] belly.
> Its back is dark; its wing [feathers] are ruddy, reddish, a well-textured even color... The wing coverts and tail coverts are blue, becoming ruddy, reddish, bright reddish, orange.

Cuextlan, according to Sahagún is the Gulf Coast homeland of the Huaxteca (1961, 10:185). Martín del Campo identifies the *alo,* on the basis of its plumage, as *Ara macao,* the Scarlet Macaw (1940:

390). The name for this bird in the *Codex Tudela* was *chiconcuetzali,* which literally means "bird of seven colors" (Tudela, 1980: 168), referring to the Scarlet Macaw's very bright red, yellow and blue plumage. The artist of the *Codex Borgia* not only pictures the *alo* with these colors, but he also draws its rough feet with crosshatching to show scales; he paints its beak white, as it appears in nature; and he depicts its eye with a sectioned ring around it, to represent the wrinkled skin that Scarlet Macaws possess around their eyes (Peterson and Chalif, 1973: Pl. 13). This depiction of the eye is analogous to the Maya representations, which show the macaw's eye with a ring of circles. Not only is this glyph the diagnostic logograph of the macaw, *mo'o* in Yucatec Mayan, but also the phonetic syllable *mo'*.

The *quetzaltototl* appears first among Sahagún's bird descriptions. This entry is long and preoccupied with the many different types of feathers this precious bird has (1963, 11:19).

> [*Quetzaltototl*]
> Its bill is pointed, yellow; its legs yellow. It has a crest, wings, a tail... [The feathers] on its tail are green, herb green, very green, fresh green, turquoise-colored. They are like wide reeds... This bird is crested; of quetzal spines, of quetzal thread feathers is its crest, very resplendent, very glistening... About its throat, and its breast [the feathers], are reddish — well colored, even colored, well textured, chili-red... The breeding place of these birds is [the province of] Tecolotlan.

Tecolotlan, meaning "Place of the Horned Owl", is not mentioned again by Sahagún, but it must be a region of the tropics, such as the cloud forests of Guatemala, where the quetzal bird lives today. The *quetzaltototl* is identified by Martín del Campo as *Pharomachrus mocinno,* the Resplendent Trogon, commonly called the quetzal bird (1940: 388). The codices depict the quetzal bird with its crest and long tail feathers, although in actuality, its tail feathers are twice the length of its body (Peterson and Chalif, 1973: Pl. 21). The *Codex Borgia* does not show the quetzal bird as being the vivid green it should be, probably because the hues have faded over time. The red breast, although plain to see in the *Codex Tudela,* does not really appear in the *Codex Borgia,* either.

The *cocho,* too, is described by Sahagún (1963, 11:23):

> [*Cocho*]
> It resembles the [*toznene*]. It has a yellow, curved bill; it is crested... Its feathers are dark green; its coverts are dark red [and] dark yellow... It is a singer, a constant singer, a talker, a speaker, a mimic...

Martín del Campo states that this bird is *Amazona albifrons,* the White-fronted Parrot. This parrot, though, has no yellow plumage whatsoever, and so could not possibly be the yellow bird which is pictured in the codices. Since the description of the *cocho* and the gloss of the *Codex Tudela* both indicate the *toznene,* it should be worthwhile to examine Sahagún's description of that bird (1963, 11:22):

> [*Toznene*]
> It has a yellow, curved bill, like that of the [*cocho*]; the head is crested. Its breeding place is especially [the province of] Cuextlan. These are its chick feathers — herb-green, dark, dark green on its back, and about its neck, and its tail, and its wings. And those at the tip of its wing-bend are green [and] yellow; they cover its flight feathers. And on its breast, on its belly, its feathers are yellow, dark yellow... And its tail and its wings are ruddy.

The toznene, according to Martín del Campo, is *Amazona oratrix,* the Yellow-headed Parrot (1940: 290). This is the only parrot which has conspicuous yellow plumage, and so is the only viable candidate for the thirteenth volatile (Edwards, 1972: Pl. 5).

Symbolic significance

Since these birds are jungle dwellers, they were only known to the Mexica by way of long-distance trade. The *Codex Fejervary-Mayer* frequently depicts the quetzal bird on top of a backpack, carried by a person with a long staff, and the *Codex Borgia* has a similar representation (1963: 55). Both the backpack and the staff are symbols of the *pochteca,* the long-distance traders of the Aztec Empire, who would venture into the tropics and return to Tenochtitlan with, among other riches, quetzal birds and their feathers.

All three tropical birds appear in the codices as birds on the directional trees. The codices *Borgia* (1963: 49), *Vaticanus B* (1896: 17) and *Fejervary-Mayer* (n. d.: 1) depict the quetzal bird sitting on the Tree of the East (Seler, 1939: 37). This is consistent with the pairing of the quetzal bird with the twelfth Lord of the Day, Tlahuizcalpantecuhtli, god of the Morning Star, which rises in the East before dawn (Nicholson, 1971: Table 2). On the Tree of the South, the *Codex Borgia* depicts the Scarlet Macaw (1963: XI, 52), while the other two codices show the Yellow-headed Parrot. This apparent contradiction simply shows that the Mexica conceived both birds to be

in the same category, and that directional associations are not universal. The directions of South and East may have been chosen because a Mexica would have to travel in those directions in order to reach the lands in which these birds are found.

The brilliant coloring of these tropical birds is highly important to their symbolism. Seler notes that the Scarlet Macaw's "long, red feathers with blue tips are called by the Mexicans *cuezalin* [or] "flame" (1939: 34), and the Macaw was also the avatar of the old fire god, Xiuhtecuhtli (Seler, 1963: II, 243). Needless to say, this bird's coloring also represented blood; one depiction of the Macaw shows it with a sacrificed heart and a stream of blood (*Codex Borgia,* 1963: 6). The red breast of the otherwise vivid green quetzal bird could well symbolize the red rising sun in the turquoise sky, or equally the bloody chest of a sacrificed captive. The quetzal bird was certainly connected to sacrifice and is often depicted in the *Codex Borgia* descending to receive the extracted hearts in an eagle vessel. The tail feathers of the quetzal bird, as Sahagún notes, are "like wide reeds", "herb-green, very green, fresh green"; this plumage easily symbolizes vegetation. The yellow-headed parrot, whose otherwise green plumage has similar connotations, was most likely symbolic of the daytime sun.

Conclusion

In this essay, the conflicts and inconsistencies among the sources on the thirteen volatiles have been presented and weighed. Some of them have been solved, but others might never be. The point of this synthesis of knowledge on what is apparently an esoteric and specific a topic, is that by the careful examination of a small part, the view of the whole becomes slightly more visible. That is, hopefully, the greater corpus of codices and the Aztec culture in general can be better understood.

The danger of the study of Aztec iconography is that much of the fundamental scholarship that has come before is relied upon too heavily. For example, Seler's brilliant but far-outdated commentary on the *Codex Borgia* has become dogma. So much work has been done in the century since its publication that a revision of his commentary can, and should, be done. For example, intensive ornithological research, the discovery of the *Codex Tudela,* and the fundamental translation of Sahagún's Nahuatl work, was not known to Seler. These sources and others must now be used, and compared to Seler's work

so that tomorrow's scholars can more easily understand the *Codex Borgia,* one of the greatest artifacts left by the Aztec civilization.

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