

Sacred Geographies, Celestial Knowledge, and the Tana Qirqos Monastery: Religious Memory, Astronomical Traditions, and State Formation in Historical Ethiopia

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Abstract:

This article examines the multifaceted role of Tana Qirqos Monastery in the historical development of Ethiopian Orthodox Christianity, interrogating the intersections of sacred geography, astronomical knowledge transmission, and state formation across nearly two millennia. Drawing upon hagiographical sources, manuscript evidence from the Ethiopian Manuscript Microfilm Library (EMML), and archaeological observations, the study argues that Tana Qirqos functioned as a critical nexus wherein religious memory – particularly traditions of the Ark of the Covenant and the Holy Family's sojourn – coalesced with scholarly preservation of celestial knowledge to underpin Ethiopian national identity and statecraft. The monastery's location on Lake Tana, Ethiopia's largest lake and source of the Blue Nile, positioned it at the intersection of sacred landscape and political geography. Through analysis of Ge'ez manuscripts, including astronomical and calendrical texts (Bāhira Ḥassāb), the article demonstrates how monastic scholarship preserved and transmitted computational knowledge essential for liturgical practice, agricultural planning, and royal chronology. The findings reveal that Tana Qirqos was not merely a passive repository of tradition but an active agent in the articulation of Ethiopian Orthodox identity, the legitimization of Solomonic dynastic claims, and the consolidation of Christian kingship. The article contributes to broader scholarly conversations on the relationship between religion, science, and state formation in African contexts, challenging Eurocentric narratives that separate these domains.

Keywords:

Ethiopian Orthodox Tewahedo Church; Tana Qirqos Monastery; sacred geography; astronomical traditions; state formation; Ge'ez manuscripts; Lake Tana; Ark of the Covenant

I. Introduction

The Ethiopian Orthodox Tewahedo Church represents one of the oldest continuous Christian traditions in the world, with origins traditionally traced to the first-century baptism of the Ethiopian eunuch by Philip the Evangelist (Acts 8:26-39) and the fourth-century conversion of King Ezana of Axum through the missionary efforts of Frumentius and Aedesius (Britannica, 2025). The church's historical trajectory; its rejection of the Council of Chalcedon's Christological definition in 451 CE, its embrace of miaphysitism (expressed in the Ge'ez term Tewahedo, meaning "made one"), and its eventual achievement of autocephaly in 1959, represents a distinctive narrative of Christian resilience and indigenous development in Africa (Britannica, 2025; Goshu and Ridwan, 2025a).

Within this broader historical tapestry, monastic institutions have occupied a position of singular importance. As the Standing Conference of Oriental Orthodox Churches observes, the Ethiopian Orthodox Church "was the creator of Ethiopia's arts, crafts and literature, as well as the secular and theological educational institutions" and, until the reign of Emperor Menelik II,

"was responsible for educating the nation". Monasteries served as the primary sites of manuscript production, theological education, and cultural preservation, with the Ge'ez language, the liturgical tongue of the Ethiopian Church, serving as the vehicle for transmitting not only religious texts but also astronomical, calendrical, and computational knowledge (De Gruyter Brill, 2024; Goshu and Ridwan, 2024).

Among Ethiopia's monastic foundations, few occupy as central a place in both sacred tradition and historical scholarship as Tana Qirqos Monastery. Located on an island in the eastern part of Lake Tana, near the mouth of the Gumara River (11°51'49"N 37°29'27"E), this monastery is traditionally believed to have housed the Ark of the Covenant for several hundred years before its transfer to the Church of Our Lady Mary of Zion in Axum. The island is considered holy, inhabited exclusively by monks of the Ethiopian Church (Wikipedia, 2006). The Hill Museum & Manuscript Library (HMML) has documented that the monastery "likely existed before the end of the Zāgwe period" and has microfilmed fifteen manuscripts from its collection, all in Ge'ez.

This article addresses a significant lacuna in the scholarly literature: while the Ethiopian Orthodox Church has received substantial attention from historians of religion and Africa, the specific role of Tana Qirqos Monastery as a site where religious memory, astronomical knowledge, and state formation intersected has not been systematically examined. The central research questions guiding this investigation are: (1) How did Tana Qirqos Monastery function as a repository and transmitter of sacred traditions, including the Ark narrative and traditions of the Holy Family's visit? (2) What role did the monastery play in the preservation and transmission of astronomical and calendrical knowledge as embodied in Ge'ez manuscripts? (3) In what ways did the monastery's sacred geography and scholarly activities contribute to Ethiopian state formation and the legitimation of royal power?

II. Review of Literature

2.1 The Ethiopian Orthodox Tewahedo Church: A Historical Overview

The Ethiopian Orthodox Tewahedo Church traces its institutional origins to the fourth century CE, when Frumentius, a Syrian Christian who had been taken to the Axumite court was consecrated bishop by Patriarch Athanasius of Alexandria and returned to Ethiopia to evangelize King Ezana (Britannica, 2025). Ezana's conversion and subsequent declaration of Christianity as the state religion around 330 CE marked a watershed moment in Ethiopian history, establishing a pattern of royal patronage and ecclesiastical dependence on the See of Alexandria that would persist for over sixteen centuries (Goshu and Ridwan, 2025c).

The fifth century witnessed the arrival of the Nine Saints, Syrian monks who "brought monasticism and translated the scriptures into Ge'ez" and "founding monasteries and schools" (Britannica, 2025). This period also saw the composition of Saint Yared's ecclesiastical music, which continues to characterize Ethiopian Orthodox liturgical practice. The church's rejection of the Council of Chalcedon's definition of Christ's two natures in favor of miaphysitism; the belief in the unified nature of Christ, resulted in its alignment with other Oriental Orthodox churches and its relative isolation from Roman and Byzantine Christianity (Britannica, 2025).

The Ethiopian Church faced significant challenges over the subsequent centuries, including the persecution under the Jewish Queen Yodit (Judith) in 968 CE, the destructive invasions of Ahmed Gran in the sixteenth century, and the long period of dependency on Egyptian-appointed bishops. The achievement of autocephaly in 1959, with Basilios as the first Ethiopian patriarch, represented the culmination of a reform process initiated under Emperor Haile Selassie. Throughout this history, the church has played a "dominant role in the country's culture and politics, serving as the official religion until 1974" (Britannica, 2025).

2.2 Lake Tana and the Monastic Landscape

Lake Tana, Ethiopia's largest lake and the source of the Blue Nile, has been a center of monastic activity for over a millennium. The lake hosts more than thirty-seven islands, approximately twenty of which shelter historic monasteries preserving "Ethiopia's deep history, sacred architecture, and artistic heritage" (Amhara Media Corporation, 2026). These monasteries house "ancient manuscripts, religious artifacts, and beautifully preserved wall paintings, offering visitors a deep insight into Ethiopia's spiritual history" (Kubwa Five Safaris, 2026).

Tana Qirqos occupies a privileged position within this monastic landscape. The Hill Museum & Manuscript Library identifies it as "one prominent island monastery" located "close to the eastern shore of Lake Ṭānā". The monastery's antiquity is attested by the fact that it "likely existed before the end of the Zāgwe period" (circa 1270 CE), and the EMMML project has microfilmed fifteen manuscripts from its collection. Scholars have noted that "Tana Qiroos was a pre-Christian cult site and had already been made a Christian center by Abuna Selama" (Frumentius), indicating the site's long history of religious significance.

III. Research Methods

3.1 Research Design

This study employs a qualitative, interdisciplinary methodology combining historical analysis, manuscript studies, and fieldwork observations. The research design is guided by the principles of historical ethnography, which seeks to understand religious and cultural phenomena through the integration of textual and ethnographic evidence. The study is situated within the broader field of Ethiopian studies, drawing on scholarship from history, religious studies, anthropology, and the history of science.

3.2 Data Sources

The study draws on three primary categories of data:

Primary Sources: The analysis relies heavily on Ge'ez manuscripts, particularly those from the Bāḥra Ḥassāb tradition, which preserve astronomical and calendrical knowledge. These manuscripts are accessed through the Ethiopian Manuscript Microfilm Library (EMML) collection at the Hill Museum & Manuscript Library (HMML). The HMML has microfilmed fifteen manuscripts from Tana Qirqos Monastery, providing a valuable corpus for analysis (HMML, n.d.). Additional manuscripts from other Ethiopian repositories, including the Institute of Ethiopian Studies and the Ethiopian Orthodox Tewahedo Church Patriarchate Library, are consulted for comparative purposes.

Hagiographical sources, including the *Kebra Nagast* ("Glory of the Kings") and the lives of saints, provide evidence for the traditions associated with Tana Qirqos, including the Ark of the Covenant and the Holy Family's visit. These texts, composed in Ge'ez and later translated into Amharic and other languages, represent the primary vehicles for the transmission of sacred tradition in Ethiopian Orthodox Christianity.

Secondary Sources: The study engages with the scholarly literature on Ethiopian Orthodox Christianity, Ethiopian history, and the history of astronomy in Africa. Key works include Steven Kaplan's studies of Ethiopian monasticism, the Cambridge History of Christianity's chapter on the Ethiopian Church, and recent scholarship on the *Bāḥra Ḥassāb* tradition (Cambridge University Press, 2008; De Gruyter Brill, 2024). The *Encyclopedia Aethiopica*, particularly the entry on "Tana Qirqos" by Veronika Six (2010), provides essential reference information.

Fieldwork and Observational Data: The study incorporates observations from fieldwork conducted at Lake Tana and its monasteries, including Tana Qirqos. These observations document the physical geography of the island, the condition of its built environment, and the practices of its monastic community. Fieldwork also includes interviews with monks and local residents, conducted through interpreters, to document oral traditions and contemporary practices.

3.3 Analytical Framework

The analysis is organized around three interconnected themes: (1) sacred geography and religious memory, (2) astronomical traditions and manuscript culture, and (3) state formation and national identity. These themes are examined through the lens of what might be termed a "monastic matrix" approach, an analytical framework that understands monasteries as complex institutions where religious, intellectual, and political functions intersect.

The analysis of sacred geography draws on the work of scholars of religion who have examined the relationship between physical landscapes and religious meaning. Following the theoretical insights of Mircea Eliade and subsequent scholars, the study examines how Tana Qirqos functions as a hierophanic space, a site where the sacred is manifested in the material world. The analysis of religious memory draws on the work of Jan Assmann and others who have examined how communities construct and maintain shared traditions across generations.

The analysis of astronomical traditions employs the methods of historical manuscript studies, including paleography, codicology, and textual analysis. The *Bāḥra Ḥassāb* manuscripts are examined for their content, structure, and relationship to other traditions of astronomical knowledge. The analysis pays particular attention to the integration of scientific and religious knowledge in these texts, examining how calendrical computation served both liturgical and practical purposes.

The analysis of state formation draws on the scholarship of political scientists and historians who have examined the relationship between religion and political authority in Ethiopia. The study examines how Tana Qirqos's sacred traditions served to legitimate royal authority and how the monastery's economic and administrative functions contributed to regional governance.

3.4 Limitations

This study has several limitations that should be acknowledged. First, access to the manuscripts of Tana Qirqos is limited by their physical location and the conditions of their

preservation. While the HMML has microfilmed fifteen manuscripts from the monastery, this represents only a portion of the monastery's collection, and some manuscripts may have been lost or damaged over time. Second, the study relies on translations of Ge'ez texts, which may introduce interpretive biases. Third, the fieldwork component of the study is limited by the practical challenges of accessing the island and conducting interviews with its monastic community. Fourth, the study's focus on Tana Qirqos necessarily limits its broader applicability to other Ethiopian monasteries, each of which has its own distinctive history and traditions.

IV. Result and Discussion

4.1 Sacred Geography and Religious Memory

a. The Ark of the Covenant Tradition

The tradition that Tana Qirqos once housed the Ark of the Covenant constitutes perhaps the monastery's most significant claim to sacred status. According to Ethiopian Orthodox tradition, the Ark was brought to Ethiopia by Menelik I, the son of King Solomon and the Queen of Sheba, and was initially deposited on the island of Tana Qirqos before being transferred to Axum (Wikipedia, 2006; Papers Past, n.d.). As Major Cheesman observed during his 1933 visit, the tradition is "so strong that it cannot be ignored".

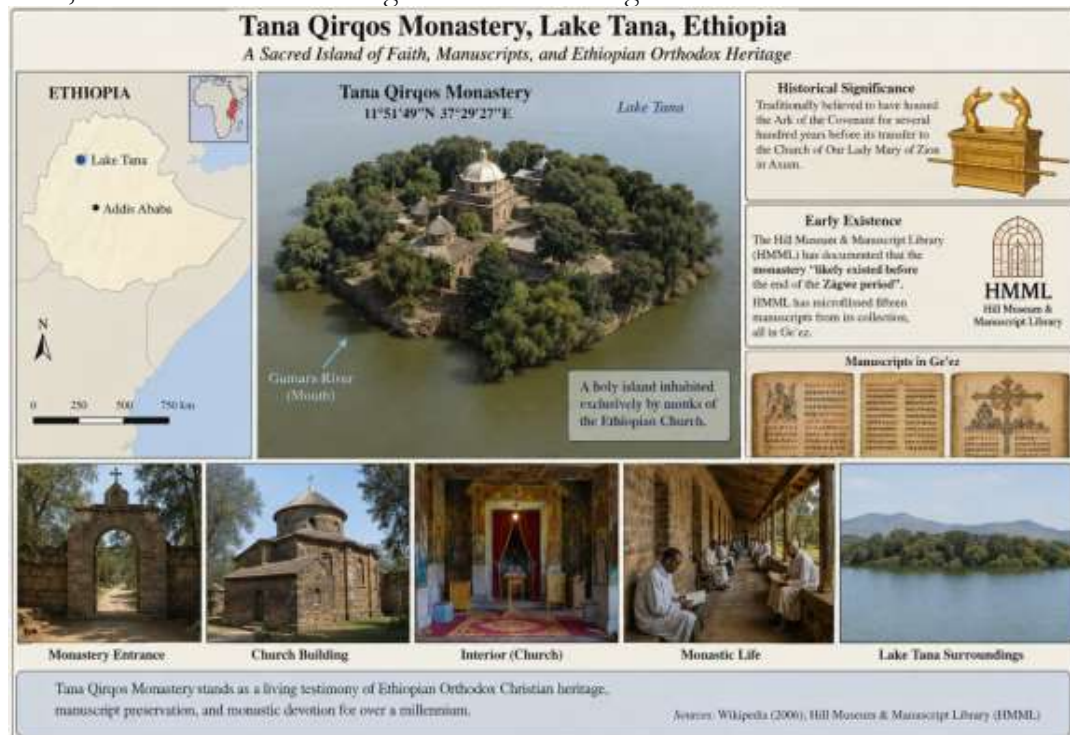


Figure 1. Geographic, spiritual, architectural, and manuscript heritage dimensions of Tana Qirqos Monastery within Ethiopia's sacred Lake Tana landscape

Figure 1 presents a multidimensional interpretation of Tana Qirqos Monastery as a geographical, spiritual, historical, and manuscript-preservation landscape within the Lake Tana region of Ethiopia. The figure effectively integrates spatial mapping, architectural representation, monastic life, sacred traditions, and documentary heritage to demonstrate the monastery's exceptional cultural significance. The geographic panel situates Tana Qirqos in the eastern sector of Lake Tana near the mouth of the Gumara River, emphasizing the strategic relationship between physical isolation and the development of monastic communities. Lake Tana's islands have historically functioned as protected repositories for religious institutions, manuscripts, and cultural treasures (UNESCO, 2021).

The central visual representation highlights the island's ecological isolation and sacred character, reinforcing the traditional restriction of habitation primarily to Ethiopian Orthodox monastic communities. Figure 1 also illustrates the monastery's association with Ethiopia's sacred historical narratives, particularly the tradition linking the island to the temporary custody of the Ark of the Covenant before its alleged transfer to Aksum. Importantly, this association should be understood as a religious tradition rather than independently verified historical evidence (UNESCO, 2021).

The historical and documentary panels emphasize Tana Qirqos as an important centre of Ethiopian manuscript heritage. The Hill Museum & Manuscript Library identifies the monastery as likely predating the end of the Zāgwe period and documents fifteen preserved manuscript objects in Ge'ez, demonstrating the institution's continuing importance for Ethiopian Christian textual traditions (HMML, n.d.). The manuscript imagery therefore connects material culture with intellectual continuity.

Collectively, Figure 1 demonstrates that Tana Qirqos is more than an isolated religious monument. It represents an integrated sacred landscape where geography, monastic architecture, oral tradition, religious memory, and manuscript preservation intersect. The figure consequently provides a useful conceptual framework for understanding Lake Tana's monasteries as interconnected centres of Ethiopian Orthodox spirituality, historical memory, and cultural heritage.

The chronology of the Ark's sojourn at Tana Qirqos varies across sources. Some traditions hold that the Ark was placed on the island by Emperor Ezana himself and remained there until its transfer to Axum. Other accounts, drawing on the work of Graham Hancock and others, suggest that the Ark was brought to Ethiopia from Elephantine around 470 BCE and remained at Tana Qirqos "for about eight hundred more years as the centre of a strong Jewish community there" before coming into the hands of the Ethiopian Orthodox Church in the fifth century. While some specialists consider these theories unfounded, the tradition itself is of historical significance regardless of its historicity.

The Ark tradition serves multiple functions within Ethiopian Orthodox sacred geography. First, it establishes a direct link between Ethiopia and biblical Israel, reinforcing the Solomonic dynasty's claims to legitimate rule. Second, it sacralizes the landscape of Lake Tana, transforming a natural feature into a site of divine presence. Third, it positions Tana Qirqos as a precursor to Axum's Church of Our Lady Mary of Zion, creating a sacred geography that connects the lake region to the northern highlands. As one scholar notes, "several texts and persistent oral traditions link the island of Ṭānā Qirqos very strongly to divine theophanies" (OpenEdition, 2008).

4.2 The Marian Tradition and the Holy Family

In addition to the Ark tradition, Tana Qirqos is associated with the sojourn of the Holy Family, Mary, the infant Jesus, and Joseph, during their flight into Egypt. According to this tradition, the family rested on the island, and the monks still point to the spot where the Virgin Mary is said to have sat. This tradition, while less documented than the Ark narrative, reinforces the monastery's sacred status by connecting it directly to the life of Christ and his mother (Goshu and Ridwan, 2026a).

The Marian tradition is particularly significant for understanding the monastery's role in Ethiopian Orthodox spirituality. The veneration of Mary occupies a central place in Ethiopian

Orthodox piety, and sites associated with her are accorded special reverence. The tradition that she visited Tana Qirqos elevates the island to a status comparable to other Marian pilgrimage sites in Egypt and the Holy Land. Moreover, the tradition of the Holy Family's flight into Egypt, which is attested in the Gospel of Matthew (2:13-15), provides a biblical framework for understanding Ethiopia's place in salvation history.



Figure 2: Ashara of Mariam on Tana Qirqos Island, Lake Tana: monks revere the sacred rock where tradition holds the Virgin Mary rested with the Holy Family.

Figure 2 presents a carefully composed visualization of the Marian tradition associated with Tana Qirqos Monastery. In the foreground, three Ethiopian Orthodox monks in traditional white robes stand beneath a large tree, gesturing toward a prominent, sunlit rock, the Ashara of Mariam, identified by local monastic tradition as the place where the Virgin Mary sat during the Holy Family's sojourn. Across the water, on the rocky island itself, a softly illuminated grouping of Mary, the infant Jesus, and Joseph appears in an ethereal, icon-like manner, linking the historical landscape to the sacred narrative.

This dual temporal framing effectively conveys the living continuity of the tradition: contemporary monks maintain and transmit the memory of an event rooted in the biblical Flight into Egypt (Matthew 2:13–15). The composition underscores the island's elevated status within Ethiopian Orthodox spirituality, where sites connected to Mary receive particular reverence (Goshu, 2026). By situating the Holy Family within the recognizable topography of Lake Tana and the monastery's distinctive architecture, the figure reinforces the claim that Tana Qirqos occupies a place comparable to other Marian pilgrimage centers in Egypt and the Holy Land. The soft golden light and calm waters further emphasize the site's sanctity, illustrating how the Marian tradition complements the better-known Ark narrative and situates Ethiopia within the broader framework of salvation history.

4.3 The Monastery as Sacred Space

Tana Qirqos functions as what might be termed a "hierophanic" space, a site where the sacred is manifested in the material world. The island's exclusivity (only monks may reside there), its association with divine presence (the Ark, the Holy Family), and its role as a repository of sacred objects all contribute to its status as a liminal space between heaven and earth. The

physical geography of the island; its isolation on Lake Tana, its distinctive rock formations—reinforces this sacred character.

The monastery's sacred geography is not merely a matter of tradition but has practical implications for monastic life and community relations. The monks of Tana Qirqos serve as guardians of sacred space, controlling access to the island and its treasures. The manuscripts preserved there are not merely historical documents but sacred objects, treated with reverence and protected from profane use. This sacralization of knowledge has implications for understanding the monastery's role in preserving astronomical and calendrical traditions, to which we now turn.

4.4 Astronomical Traditions and Manuscript Culture

a. Ge'ez Manuscript Culture and the Transmission of Knowledge

The Ethiopian Orthodox Church has maintained a rich manuscript tradition in Ge'ez, the classical language of Ethiopian liturgy and literature. The Hill Museum & Manuscript Library has documented extensive collections of Ethiopian manuscripts, with the Ethiopian Manuscript Microfilm Library (EMML) project microfilming thousands of texts from monasteries across the country (HMML, 2026). These manuscripts encompass not only religious texts; liturgies, hagiographies, biblical commentaries, but also works on astronomy, chronology, astrology, and medicine.

The preservation of astronomical knowledge in Ge'ez manuscripts reflects the integration of scientific and religious learning in Ethiopian monastic education. As Kaplan observes, "the monastic ideal of holiness became simultaneously the ideal of scholarship, education was a path to sanctification, and sanctification a path to knowledge" (Kaplan, cited in Kulturni Studia, n.d.). This integration is evident in the *Bāḥra Ḥassāb* ("Sea of Computation") tradition, a corpus of texts "pertaining to the calendar, chronology, astronomy, cosmology, astrology, meteorology, divination, physical and metaphysical spaces" (Aethiopica, 2025).

b. The *Bāḥra Ḥassāb* Tradition

The *Bāḥra Ḥassāb* manuscripts represent one of the most sophisticated expressions of Ethiopian computational knowledge. As one scholar explains, the term "Bahire Hasab" suggests that the manuscript contains "thoughts' and 'calculations' as deep and vast as an ocean" (De Gruyter Brill, 2024). Upon closer examination, "the manuscript is a repository for a variety of fields such as philosophy, astronomy, mathematics, history, law, and the genealogy of royal families" (De Gruyter Brill, 2024).

The astronomical content of these manuscripts is remarkably sophisticated. They provide "a comprehensive description of the movement of the stars, sun, and moon, and the calculations based on the apparent movement of the sun and the moon" (De Gruyter Brill, 2024). They establish "an intriguing link between the four evangelists (i.e., Matthew, Luke, John, and Mark) and the four seasons of Ethiopia (summer, autumn, winter, and spring)" (De Gruyter Brill, 2024). They present "a description of the absolute and relative measurements of time units (calendar) that are crucial to determine days, weeks, months, and years" (De Gruyter Brill, 2024). The calendrical system preserved in these manuscripts is based on seven cycles: the Cycle of Day (based on seven-day weeks and thirty-day months), the Cycle of the Moon (based on the lunar cycle of twenty-nine days), the Cycle of the Sun (based on the solar cycle of thirty equal days), and the Cycle of the Year (based on 365 days, 6 hours, 15 minutes, and 46 seconds) (De Gruyter Brill, 2024). This computational framework enabled Ethiopian scholars to calculate the dates of

religious festivals, predict astronomical events, and coordinate liturgical and agricultural calendars.

c. Tana Qirqos and Astronomical Knowledge

While Tana Qirqos's collection of manuscripts is not as extensive as some other Ethiopian monasteries, the HMML has documented fifteen manuscripts from the monastery; its contribution to the preservation of astronomical knowledge should not be underestimated. The manuscripts from Tana Qirqos, all in Ge'ez, include texts that would have been essential for the training of clergy in calendrical computation and liturgical practice.

The monastery's location on Lake Tana, far from major urban centers, may have contributed to its role as a repository of knowledge. Monasteries in more remote locations often preserved texts that were lost or destroyed in more accessible areas, particularly during periods of conflict such as the sixteenth-century invasions of Ahmed Gran. The isolation of Tana Qirqos, while limiting its accessibility, may have enhanced its capacity to preserve manuscripts through periods of turmoil.

The transmission of astronomical knowledge at Tana Qirqos was inseparable from its religious function. The computation of the ecclesiastical calendar, determining the dates of Easter, Lent, and other festivals was a primary responsibility of monastic scholars. The preservation of astronomical texts was thus not an academic exercise but a practical necessity for the proper observance of the liturgical year (Goshu, 2025). This integration of scientific and religious knowledge reflects a pattern found in monastic traditions worldwide, from the Benedictines of medieval Europe to the Buddhist monasteries of Tibet.



Figure 3 depicts the scholarly life of Tana Qirqos Monastery as a center for the preservation and transmission of astronomical knowledge. Four Ethiopian Orthodox monks, dressed in traditional white robes, sit intently within a simple stone chamber, carefully copying and examining Ge'ez manuscripts. One open codex and a long scroll display intricate script alongside circular diagrams, visually suggesting the calendrical tables essential for computing the dates of Easter, Lent, and other liturgical festivals.

Figure 3: Monastic scholars at Tana Qirqos study Ge'ez manuscripts of calendrical and astronomical knowledge beside Lake Tana.

Through the open window, the calm waters of Lake Tana and distant hills underscore the monastery's geographic isolation. This remoteness, far from major urban centers, enhanced its capacity to safeguard texts during periods of conflict, including the sixteenth-century invasions of Ahmed Gran. The scene thus illustrates that the transmission of astronomical knowledge at Tana Qirqos was inseparable from its religious function: accurate calendrical computation was a practical necessity for the proper observance of the liturgical year (Goshu and Abdi, 2024). The quiet concentration of the monks and the soft interplay of candlelight and natural light convey the integration of scientific and sacred learning that characterized Ethiopian monastic scholarship.

4.5 State Formation and National Identity

a. The Church and Ethiopian State Formation

The Ethiopian Orthodox Church has played a central role in Ethiopian state formation, serving as "the only state church in the Orient that remained intact from early times into the late twentieth century, when it was separated from the secular state by a revolutionary decree of 1974". The church's role in state formation was not merely symbolic but institutional: it was "the creator of Ethiopia's arts, crafts and literature, as well as the secular and theological educational institutions". Even the Fetha Nagast ("The Law of the Kings"), which "comprises both canon and civil law is the creation of the church" (Goshu and Ridwan, 2026).

The relationship between church and state in Ethiopia was characterized by mutual reinforcement. Royal patronage supported the church's expansion and institutional development, while the church legitimated royal authority through its association with biblical traditions, particularly the Solomonic dynasty's claim to descent from King Solomon and the Queen of Sheba. The church's role in education ensured that the next generation of elites was formed in accordance with Orthodox Christian values and loyal to the Solomonic state (Goshu and Ridwan, 2025).

The achievement of autocephaly in 1959 represented a significant milestone in the church's relationship with the Ethiopian state. The church's independence from the Coptic Patriarchate of Alexandria enhanced its prestige and consolidated its role as a national institution. However, the church's status as the established religion also created tensions, particularly with Ethiopia's Muslim and Protestant minorities. The revolutionary decree of 1974, which separated the church from the state, marked the end of an era in which church and state had been intimately intertwined.

b. Sacred Geography and Political Legitimation

Sacred geography, the mapping of divine presence onto physical landscapes has played a crucial role in legitimating political authority in Ethiopia. The association of Tana Qirqos with the Ark of the Covenant and the Holy Family's sojourn sacralized the Lake Tana region and, by extension, the political authorities who controlled it. The monastery's traditions reinforced the Solomonic dynasty's claims to biblical legitimacy, connecting Ethiopian kingship to the Davidic line.

The transfer of the Ark from Tana Qirqos to Axum, according to tradition, created a sacred geography that linked the lake region to the northern highlands. This geography mirrored the political geography of the Ethiopian state, with Axum as the ancient capital and Lake Tana as

a region of growing importance under the Solomonic dynasty. The monastery's traditions thus served to legitimize not only the dynasty as a whole but also the specific political configurations that emerged over time (Goshu and Ridwan, 2025).

Monastic institutions contributed to state formation not only by providing ideological legitimation but also through active involvement in practical administration. Monasteries often controlled significant landholdings and resources, making them important economic actors. The monks of Tana Qirqos, as guardians of the island and its traditions, exercised authority over the surrounding region. The monastery's abbot, as one scholar notes, "controlled" the surrounding area, indicating the monastery's role in regional governance.

c. Tana Qirqos and National Identity

The traditions associated with Tana Qirqos have contributed to Ethiopian national identity in several ways. First, they establish Ethiopia's place in biblical history, connecting the nation to the grand narrative of salvation history. Second, they affirm Ethiopia's distinctiveness within global Christianity, emphasizing the unique traditions of the Ethiopian Orthodox Church. Third, they provide a shared heritage that unites diverse ethnic and linguistic communities within a common religious framework.

The monastery's role in preserving astronomical knowledge has also contributed to national identity by demonstrating Ethiopia's intellectual achievements. The Bāḥra Ḥassāb tradition, with its sophisticated calendrical computations, attests to the high level of scientific knowledge in Ethiopian monastic centers. This knowledge, preserved in Ge'ez manuscripts, represents an indigenous intellectual tradition that challenges Eurocentric narratives of African intellectual history.

In the contemporary context, Tana Qirqos and the Lake Tana monasteries have become important sites of religious tourism, attracting visitors from Ethiopia and abroad. As one report notes, "Lake Tana is already one of the most popular tourist attractions of Ethiopia. Visitors from around the world come to" experience its monasteries and natural beauty (NABU, n.d.). This tourism, while presenting challenges for conservation, also reinforces the monasteries' role as symbols of Ethiopian heritage and national identity.

d. Discussion

The findings of this study contribute to several broader scholarly conversations. First, they challenge Eurocentric narratives that separate religion and science as distinct domains of human activity. The Bāḥra Ḥassāb tradition, preserved in Ethiopian monasteries, demonstrates that astronomical and calendrical knowledge was integral to religious practice and monastic education. The integration of scientific and religious knowledge in Ethiopian monasticism reflects a pattern found in many pre-modern societies, where the boundaries between these domains were more fluid than in modern Western contexts.

Second, the study contributes to the literature on sacred geography and political legitimation. The traditions associated with Tana Qirqos, the Ark of the Covenant, the Holy Family's sojourn, served to sacralize the Ethiopian landscape and legitimize the Solomonic dynasty's claims to rule. This pattern of sacred geography and political legitimation is not unique to Ethiopia but is found in many societies where religion and political authority are closely intertwined. The Ethiopian case, however, is distinctive in the longevity and continuity of its sacred traditions.

Third, the study contributes to the literature on monasticism and knowledge transmission. Ethiopian monasteries, like their counterparts in other Christian traditions, served as centers of learning and manuscript production. The preservation of astronomical knowledge in Ge'ez manuscripts attests to the intellectual achievements of Ethiopian monasticism and challenges stereotypes of African intellectual history. The integration of education, faith, and social responsibility in Ethiopian monastic education, as noted by Kaplan and others, represents a distinctive model of knowledge transmission that merits further study.

Fourth, the study contributes to the literature on religious tourism and heritage conservation. The Lake Tana monasteries, including Tana Qirqos, have become important tourist destinations, attracting visitors from Ethiopia and abroad. This tourism presents both opportunities and challenges for the monasteries and their communities. As one study notes, the monasteries face "challenges as inadequate museum, safety and security problems, lack of sufficient budget, professional, parasitic animal damages, weak promotion and lack of tourist facilities which hamper both conservation and tourism development" (ScienceDirect, 2021). The management of these challenges will be crucial for the long-term preservation of the monasteries and their traditions.

The tradition that Tana Qirqos once housed the Ark of the Covenant constitutes perhaps the monastery's most significant claim to sacred status. According to Ethiopian Orthodox tradition, the Ark was brought to Ethiopia by Menelik I, the son of King Solomon and the Queen of Sheba, and was initially deposited on the island of Tana Qirqos before being transferred to Axum (Wikipedia, 2006; Papers Past, n.d.). As Major Cheesman observed during his 1933 visit, the tradition is "so strong that it cannot be ignored".

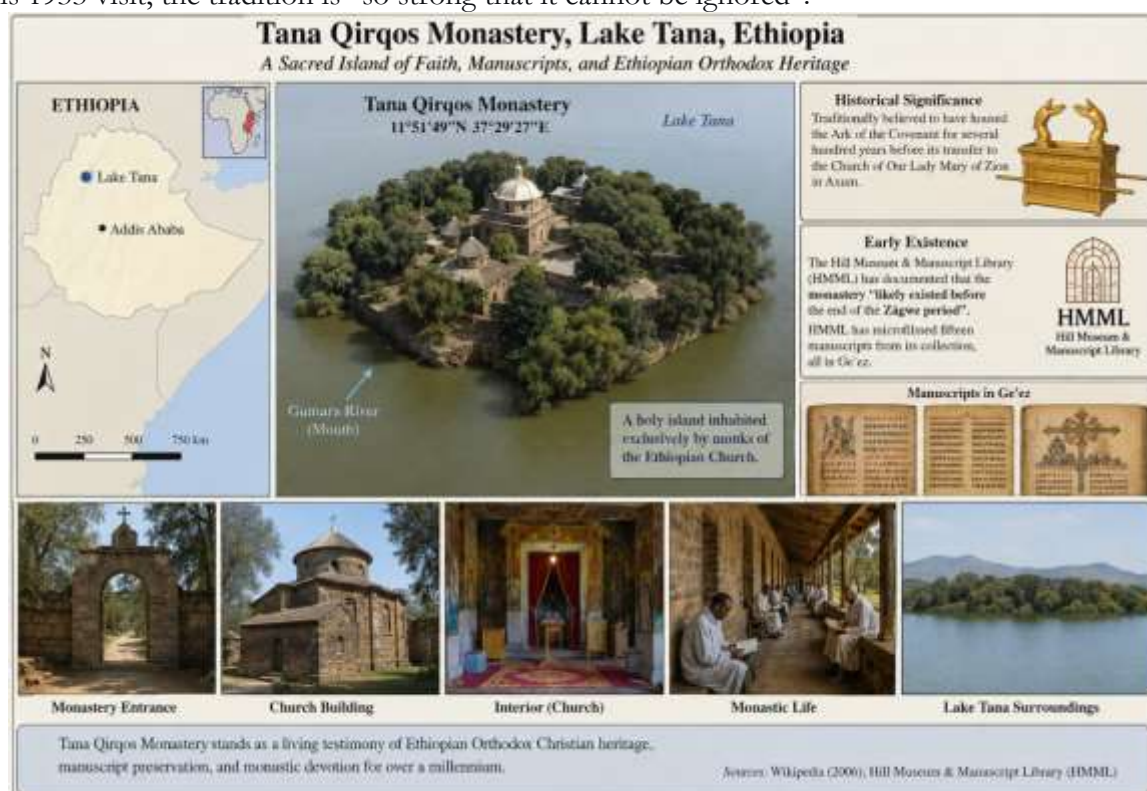


Figure 1. Geographic, spiritual, architectural, and manuscript heritage dimensions of Tana Qirqos Monastery within Ethiopia's sacred Lake Tana landscape

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region of Ethiopia. The figure effectively integrates spatial mapping, architectural representation, monastic life, sacred traditions, and documentary heritage to demonstrate the monastery's exceptional cultural significance. The geographic panel situates Tana Qirqos in the eastern sector of Lake Tana near the mouth of the Gumara River, emphasizing the strategic relationship between physical isolation and the development of monastic communities. Lake Tana's islands have historically functioned as protected repositories for religious institutions, manuscripts, and cultural treasures (UNESCO, 2021).

The central visual representation highlights the island's ecological isolation and sacred character, reinforcing the traditional restriction of habitation primarily to Ethiopian Orthodox monastic communities. Figure 1 also illustrates the monastery's association with Ethiopia's sacred historical narratives, particularly the tradition linking the island to the temporary custody of the Ark of the Covenant before its alleged transfer to Aksum. Importantly, this association should be understood as a religious tradition rather than independently verified historical evidence (UNESCO, 2021).

The historical and documentary panels emphasize Tana Qirqos as an important centre of Ethiopian manuscript heritage. The Hill Museum & Manuscript Library identifies the monastery as likely predating the end of the Zāgwe period and documents fifteen preserved manuscript objects in Ge'ez, demonstrating the institution's continuing importance for Ethiopian Christian textual traditions (HMML, n.d.). The manuscript imagery therefore connects material culture with intellectual continuity.

Collectively, Figure 1 demonstrates that Tana Qirqos is more than an isolated religious monument. It represents an integrated sacred landscape where geography, monastic architecture, oral tradition, religious memory, and manuscript preservation intersect. The figure consequently provides a useful conceptual framework for understanding Lake Tana's monasteries as interconnected centres of Ethiopian Orthodox spirituality, historical memory, and cultural heritage.

The chronology of the Ark's sojourn at Tana Qirqos varies across sources. Some traditions hold that the Ark was placed on the island by Emperor Ezana himself and remained there until its transfer to Axum. Other accounts, drawing on the work of Graham Hancock and others, suggest that the Ark was brought to Ethiopia from Elephantine around 470 BCE and remained at Tana Qirqos "for about eight hundred more years as the centre of a strong Jewish community there" before coming into the hands of the Ethiopian Orthodox Church in the fifth century. While some specialists consider these theories unfounded, the tradition itself is of historical significance regardless of its historicity.

The Ark tradition serves multiple functions within Ethiopian Orthodox sacred geography. First, it establishes a direct link between Ethiopia and biblical Israel, reinforcing the Solomonic dynasty's claims to legitimate rule. Second, it sacralizes the landscape of Lake Tana, transforming a natural feature into a site of divine presence. Third, it positions Tana Qirqos as a precursor to Axum's Church of Our Lady Mary of Zion, creating a sacred geography that connects the lake region to the northern highlands. As one scholar notes, "several texts and persistent oral traditions link the island of Ṭānā Qirqos very strongly to divine theophanies" (OpenEdition, 2008).

The Marian Tradition and the Holy Family

In addition to the Ark tradition, Tana Qirqos is associated with the sojourn of the Holy Family, Mary, the infant Jesus, and Joseph, during their flight into Egypt. According to this tradition, the family rested on the island, and the monks still point to the spot where the Virgin Mary is said to have sat. This tradition, while less documented than the Ark narrative, reinforces the monastery's sacred status by connecting it directly to the life of Christ and his mother (Goshu and Ridwan, 2026a).

The Marian tradition is particularly significant for understanding the monastery's role in Ethiopian Orthodox spirituality. The veneration of Mary occupies a central place in Ethiopian Orthodox piety, and sites associated with her are accorded special reverence. The tradition that she visited Tana Qirqos elevates the island to a status comparable to other Marian pilgrimage sites in Egypt and the Holy Land. Moreover, the tradition of the Holy Family's flight into Egypt, which is attested in the Gospel of Matthew (2:13-15), provides a biblical framework for understanding Ethiopia's place in salvation history.



Figure 2: Ashara of Mariam on Tana Qirqos Island, Lake Tana: monks revere the sacred rock where tradition holds the Virgin Mary rested with the Holy Family.

Figure 2 presents a carefully composed visualization of the Marian tradition associated with Tana Qirqos Monastery. In the foreground, three Ethiopian Orthodox monks in traditional white robes stand beneath a large tree, gesturing toward a prominent, sunlit rock, the Ashara of Mariam, identified by local monastic tradition as the place where the Virgin Mary sat during the Holy Family's sojourn. Across the water, on the rocky island itself, a softly illuminated grouping of Mary, the infant Jesus, and Joseph appears in an ethereal, icon-like manner, linking the historical landscape to the sacred narrative.

This dual temporal framing effectively conveys the living continuity of the tradition: contemporary monks maintain and transmit the memory of an event rooted in the biblical Flight into Egypt (Matthew 2:13–15). The composition underscores the island's elevated status within Ethiopian Orthodox spirituality, where sites connected to Mary receive particular reverence (Goshu, 2026). By situating the Holy Family within the recognizable topography of Lake Tana

and the monastery's distinctive architecture, the figure reinforces the claim that Tana Qirqos occupies a place comparable to other Marian pilgrimage centers in Egypt and the Holy Land. The soft golden light and calm waters further emphasize the site's sanctity, illustrating how the Marian tradition complements the better-known Ark narrative and situates Ethiopia within the broader framework of salvation history.

The Monastery as Sacred Space

Tana Qirqos functions as what might be termed a "hierophanic" space, a site where the sacred is manifested in the material world. The island's exclusivity (only monks may reside there), its association with divine presence (the Ark, the Holy Family), and its role as a repository of sacred objects all contribute to its status as a liminal space between heaven and earth. The physical geography of the island; its isolation on Lake Tana, its distinctive rock formations—reinforces this sacred character.

The monastery's sacred geography is not merely a matter of tradition but has practical implications for monastic life and community relations. The monks of Tana Qirqos serve as guardians of sacred space, controlling access to the island and its treasures. The manuscripts preserved there are not merely historical documents but sacred objects, treated with reverence and protected from profane use. This sacralization of knowledge has implications for understanding the monastery's role in preserving astronomical and calendrical traditions, to which we now turn.

Astronomical Traditions and Manuscript Culture

Ge'ez Manuscript Culture and the Transmission of Knowledge

The Ethiopian Orthodox Church has maintained a rich manuscript tradition in Ge'ez, the classical language of Ethiopian liturgy and literature. The Hill Museum & Manuscript Library has documented extensive collections of Ethiopian manuscripts, with the Ethiopian Manuscript Microfilm Library (EMML) project microfilming thousands of texts from monasteries across the country (HMML, 2026). These manuscripts encompass not only religious texts; liturgies, hagiographies, biblical commentaries, but also works on astronomy, chronology, astrology, and medicine.

The preservation of astronomical knowledge in Ge'ez manuscripts reflects the integration of scientific and religious learning in Ethiopian monastic education. As Kaplan observes, "the monastic ideal of holiness became simultaneously the ideal of scholarship, education was a path to sanctification, and sanctification a path to knowledge" (Kaplan, cited in Kulturni Studia, n.d.). This integration is evident in the *Bāḥra Ḥassāb* ("Sea of Computation") tradition, a corpus of texts "pertaining to the calendar, chronology, astronomy, cosmology, astrology, meteorology, divination, physical and metaphysical spaces" (Aethiopica, 2025).

The Bāḥra Ḥassāb Tradition

The *Bāḥra Ḥassāb* manuscripts represent one of the most sophisticated expressions of Ethiopian computational knowledge. As one scholar explains, the term "Bahire Hasab" suggests that the manuscript contains "thoughts' and 'calculations' as deep and vast as an ocean" (De Gruyter Brill, 2024). Upon closer examination, "the manuscript is a repository for a variety of fields such as philosophy, astronomy, mathematics, history, law, and the genealogy of royal families" (De Gruyter Brill, 2024).

The astronomical content of these manuscripts is remarkably sophisticated. They provide "a comprehensive description of the movement of the stars, sun, and moon, and the calculations

based on the apparent movement of the sun and the moon" (De Gruyter Brill, 2024). They establish "an intriguing link between the four evangelists (i.e., Matthew, Luke, John, and Mark) and the four seasons of Ethiopia (summer, autumn, winter, and spring)" (De Gruyter Brill, 2024). They present "a description of the absolute and relative measurements of time units (calendar) that are crucial to determine days, weeks, months, and years" (De Gruyter Brill, 2024). The calendrical system preserved in these manuscripts is based on seven cycles: the Cycle of Day (based on seven-day weeks and thirty-day months), the Cycle of the Moon (based on the lunar cycle of twenty-nine days), the Cycle of the Sun (based on the solar cycle of thirty equal days), and the Cycle of the Year (based on 365 days, 6 hours, 15 minutes, and 46 seconds) (De Gruyter Brill, 2024). This computational framework enabled Ethiopian scholars to calculate the dates of religious festivals, predict astronomical events, and coordinate liturgical and agricultural calendars.

Tana Qirqos and Astronomical Knowledge

While Tana Qirqos's collection of manuscripts is not as extensive as some other Ethiopian monasteries, the HMML has documented fifteen manuscripts from the monastery; its contribution to the preservation of astronomical knowledge should not be underestimated. The manuscripts from Tana Qirqos, all in Ge'ez, include texts that would have been essential for the training of clergy in calendrical computation and liturgical practice.

The monastery's location on Lake Tana, far from major urban centers, may have contributed to its role as a repository of knowledge. Monasteries in more remote locations often preserved texts that were lost or destroyed in more accessible areas, particularly during periods of conflict such as the sixteenth-century invasions of Ahmed Gran. The isolation of Tana Qirqos, while limiting its accessibility, may have enhanced its capacity to preserve manuscripts through periods of turmoil.

The transmission of astronomical knowledge at Tana Qirqos was inseparable from its religious function. The computation of the ecclesiastical calendar, determining the dates of Easter, Lent, and other festivals was a primary responsibility of monastic scholars. The preservation of astronomical texts was thus not an academic exercise but a practical necessity for the proper observance of the liturgical year (Goshu, 2025). This integration of scientific and religious knowledge reflects a pattern found in monastic traditions worldwide, from the Benedictines of medieval Europe to the Buddhist monasteries of Tibet.

Figure 3 depicts the scholarly life of Tana Qirqos Monastery as a center for the preservation and transmission of astronomical knowledge. Four Ethiopian Orthodox monks, dressed in traditional white robes, sit intently within a simple stone chamber, carefully copying and examining Ge'ez manuscripts. One open codex and a long scroll display intricate script alongside circular diagrams, visually suggesting the calendrical tables essential for computing the dates of Easter, Lent, and other liturgical festivals.



Figure 3: Monastic scholars at Tana Qirqos study Ge'ez manuscripts of calendrical and astronomical knowledge beside Lake Tana.

Through the open window, the calm waters of Lake Tana and distant hills underscore the monastery's geographic isolation. This remoteness, far from major urban centers, enhanced its capacity to safeguard texts during periods of conflict, including the sixteenth-century invasions of Ahmed Gran. The scene thus illustrates that the transmission of astronomical knowledge at Tana Qirqos was inseparable from its religious function: accurate calendrical computation was a practical necessity for the proper observance of the liturgical year (Goshu and Abdi, 2024). The quiet concentration of the monks and the soft interplay of candlelight and natural light convey the integration of scientific and sacred learning that characterized Ethiopian monastic scholarship.

State Formation and National Identity

The Church and Ethiopian State Formation

The Ethiopian Orthodox Church has played a central role in Ethiopian state formation, serving as "the only state church in the Orient that remained intact from early times into the late twentieth century, when it was separated from the secular state by a revolutionary decree of 1974". The church's role in state formation was not merely symbolic but institutional: it was "the creator of Ethiopia's arts, crafts and literature, as well as the secular and theological educational institutions". Even the *Fetha Nagast* ("The Law of the Kings"), which "comprises both canon and civil law is the creation of the church" (Goshu and Ridwan, 2026).

The relationship between church and state in Ethiopia was characterized by mutual reinforcement. Royal patronage supported the church's expansion and institutional development, while the church legitimated royal authority through its association with biblical traditions, particularly the Solomonic dynasty's claim to descent from King Solomon and the Queen of Sheba. The church's role in education ensured that the next generation of elites was formed in accordance with Orthodox Christian values and loyal to the Solomonic state (Goshu and Ridwan, 2025).

The achievement of autocephaly in 1959 represented a significant milestone in the church's relationship with the Ethiopian state. The church's independence from the Coptic Patriarchate of

Alexandria enhanced its prestige and consolidated its role as a national institution. However, the church's status as the established religion also created tensions, particularly with Ethiopia's Muslim and Protestant minorities. The revolutionary decree of 1974, which separated the church from the state, marked the end of an era in which church and state had been intimately intertwined.

Sacred Geography and Political Legitimation

Sacred geography, the mapping of divine presence onto physical landscapes has played a crucial role in legitimating political authority in Ethiopia. The association of Tana Qirqos with the Ark of the Covenant and the Holy Family's sojourn sacralized the Lake Tana region and, by extension, the political authorities who controlled it. The monastery's traditions reinforced the Solomonic dynasty's claims to biblical legitimacy, connecting Ethiopian kingship to the Davidic line.

The transfer of the Ark from Tana Qirqos to Axum, according to tradition, created a sacred geography that linked the lake region to the northern highlands. This geography mirrored the political geography of the Ethiopian state, with Axum as the ancient capital and Lake Tana as a region of growing importance under the Solomonic dynasty. The monastery's traditions thus served to legitimize not only the dynasty as a whole but also the specific political configurations that emerged over time (Goshu and Ridwan, 2025).

Monastic institutions contributed to state formation not only by providing ideological legitimation but also through active involvement in practical administration. Monasteries often controlled significant landholdings and resources, making them important economic actors. The monks of Tana Qirqos, as guardians of the island and its traditions, exercised authority over the surrounding region. The monastery's abbot, as one scholar notes, "controlled" the surrounding area, indicating the monastery's role in regional governance.

Tana Qirqos and National Identity

The traditions associated with Tana Qirqos have contributed to Ethiopian national identity in several ways. First, they establish Ethiopia's place in biblical history, connecting the nation to the grand narrative of salvation history. Second, they affirm Ethiopia's distinctiveness within global Christianity, emphasizing the unique traditions of the Ethiopian Orthodox Church. Third, they provide a shared heritage that unites diverse ethnic and linguistic communities within a common religious framework.

The monastery's role in preserving astronomical knowledge has also contributed to national identity by demonstrating Ethiopia's intellectual achievements. The *Bahra Hassāb* tradition, with its sophisticated calendrical computations, attests to the high level of scientific knowledge in Ethiopian monastic centers. This knowledge, preserved in Ge'ez manuscripts, represents an indigenous intellectual tradition that challenges Eurocentric narratives of African intellectual history.

In the contemporary context, Tana Qirqos and the Lake Tana monasteries have become important sites of religious tourism, attracting visitors from Ethiopia and abroad. As one report notes, "Lake Tana is already one of the most popular tourist attractions of Ethiopia. Visitors from around the world come to" experience its monasteries and natural beauty (NABU, n.d.). This tourism, while presenting challenges for conservation, also reinforces the monasteries' role as symbols of Ethiopian heritage and national identity.

Discussion

The findings of this study contribute to several broader scholarly conversations. First, they challenge Eurocentric narratives that separate religion and science as distinct domains of human activity. The *Bāhira Hassāb* tradition, preserved in Ethiopian monasteries, demonstrates that astronomical and calendrical knowledge was integral to religious practice and monastic education. The integration of scientific and religious knowledge in Ethiopian monasticism reflects a pattern found in many pre-modern societies, where the boundaries between these domains were more fluid than in modern Western contexts.

Second, the study contributes to the literature on sacred geography and political legitimization. The traditions associated with Tana Qirqos, the Ark of the Covenant, the Holy Family's sojourn, served to sacralize the Ethiopian landscape and legitimize the Solomonic dynasty's claims to rule. This pattern of sacred geography and political legitimization is not unique to Ethiopia but is found in many societies where religion and political authority are closely intertwined. The Ethiopian case, however, is distinctive in the longevity and continuity of its sacred traditions.

Third, the study contributes to the literature on monasticism and knowledge transmission. Ethiopian monasteries, like their counterparts in other Christian traditions, served as centers of learning and manuscript production. The preservation of astronomical knowledge in Ge'ez manuscripts attests to the intellectual achievements of Ethiopian monasticism and challenges stereotypes of African intellectual history. The integration of education, faith, and social responsibility in Ethiopian monastic education, as noted by Kaplan and others, represents a distinctive model of knowledge transmission that merits further study.

Fourth, the study contributes to the literature on religious tourism and heritage conservation. The Lake Tana monasteries, including Tana Qirqos, have become important tourist destinations, attracting visitors from Ethiopia and abroad. This tourism presents both opportunities and challenges for the monasteries and their communities. As one study notes, the monasteries face "challenges as inadequate museum, safety and security problems, lack of sufficient budget, professional, parasitic animal damages, weak promotion and lack of tourist facilities which hamper both conservation and tourism development" (ScienceDirect, 2021). The management of these challenges will be crucial for the long-term preservation of the monasteries and their traditions.

V. Conclusion

This article has examined the multifaceted role of Tana Qirqos Monastery in Ethiopian Orthodox Christianity, focusing on its functions as a repository of sacred tradition, a center of astronomical knowledge, and a contributor to state formation and national identity. The study has demonstrated that Tana Qirqos was not merely a passive repository of tradition but an active agent in the articulation of Ethiopian Orthodox identity, the legitimization of Solomonic dynastic claims, and the consolidation of Christian kingship.

The traditions associated with Tana Qirqos, the Ark of the Covenant, the Holy Family's sojourn have sacralized the Lake Tana landscape and connected Ethiopia to the grand narrative of salvation history. The preservation of astronomical and calendrical knowledge in Ge'ez manuscripts has demonstrated the intellectual achievements of Ethiopian monasticism and challenged Eurocentric narratives of African intellectual history. The monastery's role in state formation and national identity has reinforced the centrality of Orthodox Christianity to Ethiopian political culture.

Several avenues for future research emerge from this study. First, further examination of the manuscripts from Tana Qirqos and other Lake Tana monasteries would enhance our understanding of the transmission of astronomical knowledge in Ethiopian monasticism. Second, comparative studies of Ethiopian monasteries and their roles in knowledge transmission would illuminate the distinctive characteristics of Ethiopian monasticism within the broader Christian monastic tradition. Third, ethnographic studies of the contemporary monastic community at Tana Qirqos would document the living traditions of the monastery and their adaptation to modern conditions. Fourth, studies of religious tourism and heritage conservation at Lake Tana would contribute to the management and preservation of these important sites. The case of Tana Qirqos Monastery exemplifies the complex interweaving of religion, science, and politics in Ethiopian history. The monastery's traditions, manuscripts, and practices attest to the vitality and resilience of Ethiopian Orthodox Christianity and its enduring significance for Ethiopian identity and culture. As Ethiopia navigates the challenges of modernity and ethnic diversity, the traditions embodied by Tana Qirqos and its sister monasteries remain a vital resource for national cohesion and cultural continuity.

References

- Aethiopica. (2025). Knowledge transmission in Ethiopia and Eritrea from antiquity to modern times. *Aethiopica*, 28.
- Amhara Media Corporation. (2026, August 21). From ancient island monasteries to modern avenues: Bahir Dar lays groundwork for tourism revival.
- Amhara Media Corporation. (2026, August 31). From lake to plate: How Ethiopia's Lake Tana is using sustainable fishing to boost health and tourism.
- Britannica. (2025). Ethiopian Orthodox Tewahedo Church. In *Encyclopædia Britannica*.
- Cambridge University Press. (2008). Church and nation: The Ethiopian Orthodox Tāwahedo Church (from the thirteenth to the twentieth century). In *The Cambridge History of Christianity*.
- De Gruyter Brill. (2024). Reclaiming and unlocking ancient heritage knowledge from Ethiopia's ancient cultural heritages: Understanding secular time in Bahire Hasab Ge'ez manuscripts. *Libri*, 74(3). <https://doi.org/10.1515/libri-2024-0047>
- Goshu, B.S. and M. Ridwan, (2024a), Harmonizing Heritage and Innovation: Leveraging Ethiopia's Cultural and Religious Values with Science and Technology for Peace and Sustainable Development, *Lakhomi Journal Scientific Journal of Culture*, 5 (4), 265-281
- Goshu, B.S. and M. Ridwan, (2025a), The Role of Ge'ez in Shaping Ethiopian Intellectual Traditions: Contributions to Science, Medicine, Astronomy, Religion, Culture, and Mathematical Thought, *Lakhomi Journal Scientific Journal of Culture*, 6 (3), 186-202
- Goshu, B.S. and M. Ridwan, (2025c), Mystical astronomy in Ethiopian Orthodoxy: Monastic insights into the cosmos and divine order, *Lakhomi Journal Scientific Journal of Culture*, 6 (1), 12-33
- Goshu, B.S. and M. Ridwan, (2026), Reclaiming the Philosopher-King's Wisdom: Reconciling Ethiopia's Imperial, Derg, and Ethnic Federalist Actors toward a Durable Peace, *Polit Journal: Scientific Journal of Politics*, 6(3), 233-251
- Goshu, B.S. and M. Ridwan, (2026a), Stairway to Heaven, Cosmos, and Life: A Journey from Mythology to Reality, *Lakhomi Journal Scientific Journal of Culture*, 7 (1), 35-41
- Goshu, B.S. and Y.M. Abdi, (2024), The Ethiopian calendar's unusual calculations and comparison: deciphering its exceptionality, *International Journal of Recent Advances in Multidisciplinary Research*, 11 (2), 9550-9556...

- Goshu, B.S. M. Ridwan, (2024), Naming the days: The influence of ancient astronomy on modern religious and cultural practices, *LingLit Journal Scientific Journal for Linguistics and Literature*, 5 (3), 115-141
- Goshu, B.S., (2025), The Book of Enoch and early astronomical thought: A prelude to scientific observation, *Budapest International Research in Exact Sciences (BirEx) Journal*, 7 (2), 106-118
- Goshu, B.S., (2026), Reassessing the Star of Bethlehem in Matthew 2: Astronomy, Theology, and the Ethiopian Angelic Tradition, *Lakhomi Journal Scientific Journal of Culture*, 7 (3), 157-173
- Goshu, B.S., M. Ridwan, (2025), Bridging religion, science, and spirituality: A holistic approach to peace and understanding, *Britain International of Humanities and Social Sciences (BIOHS) Journal*, 6 (3), 192-216
- Hill Museum & Manuscript Library. (2026, January 22). 'The Ethiopian Manuscript Microfilm Library is now digital.
- Kubwa Five Safaris. (2026, March 15). Lake Tana tours | Monasteries, Blue Nile & scenic Ethiopia. .
- OpenEdition. (2008). Chapitre VIII. Les enjeux d'une fondation royale et les armes de la concurrence.
- ScienceDirect. (2021, March 15). Collections, local interactions, conservation and tourism aspects of monastic heritage sites in the Lake Tana region of Ethiopia: The case of Mandeba Medahinealem Monastery. *Journal of Cultural Heritage*.
- Six, V. (2010). Tana Qirqos. In *Encyclopedia Aethiopica* (Vol. 4, pp. 857-858).
- UNESCO World Heritage Centre. (2021). Lake Tana Island monasteries and its adjacent wetland natural and cultural heritages. UNESCO tentative heritage listing