

The symbolic plants of the Two Lands in the *sema tawy* motif

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1 The *sema tawy* motif

The Kingdom of Egypt emerged at the beginning of the Early Dynastic Period through the unification of formerly independent principalities. When the kingdom temporarily fell apart during the Intermediate Periods, this was perceived as a violation of the all-encompassing order. Nevertheless, the Egyptians maintained the traditional distinction between Upper and Lower Egypt throughout the entire pharaonic era. They referred to these regions as the “Two Lands” and assigned each land its own royal crown, its own administrative unit, and its own symbols.

The desired state of unity between Upper and Lower Egypt under the rule of a single king was depicted in an artistic motif. In it, each of the two lands is represented by a symbolic plant (often referred to in older literature as a “heraldic plant”). The prolonged central

stems of these two plants form a knot around the hieroglyph , which stands for the word *zm³*, “union”;¹ *zm³ t³wj* (*sema tawy*) means “union of the two lands.” Often, it is the gods Horus and Seth or Nile gods who tie the two plants around the *zm³* hieroglyph. In an incomplete version of the motif on a vessel fragment from the 1st Dynasty, the two plants are grouped around the *zm³* hieroglyph but are not yet tied together (Fig. 1 a).² On many seated statues of kings from the Old Kingdom and the 12th Dynasty, the motif adorns the sides of the throne (Fig. 1b).³



a) *Sema tawy* motif on a pottery fragment, tomb of King Andjib, Abydos, 1st Dyn.



b) *Sema tawy* motif on the throne of a seated statue of King Khafre, Gizeh, 4th Dyn.

¹ The  hieroglyph depicts a lung with windpipe (in my opinion, a goose's lung) (Ref 1, p 432).

² Ref 2, p 75, fig 2.

³ Ref 3, plts 16, 18, 28, 40, 41; Ref 4, CG 9–17; Ref 5, CG 415, 418–420.



c) *Sema tawy* motif with Horus and Seth on the throne of a seated statue of King Senwosret I, El-Lisht, 12th Dyn.



d) *Sema tawy* motif with Nile gods, temple of Luxor, 18th Dyn.

Fig. 1: Different versions of the *sema tawy* motif

2 Lower Egypt: Papyrus

The symbolic plant of Lower Egypt is undoubtedly the papyrus plant (*Cyperus papyrus*). This reed was widespread in ancient Egypt, particularly in the Faiyum Oasis and the Nile Delta, which forms Lower Egypt. It grows along the banks of stagnant or slow-flowing bodies of freshwater. The individual triangular, gray-green stems are interconnected in the soft substrate by an extensive system of rhizomes and can reach a diameter of up to 10 centimeters and a height of up to 6 meters. Each stem is surrounded at the base by a leaf sheath composed of lanceolate leaves and bears an umbel at the tip (Fig. 2 a–c). The arched umbel rays emerge from a calyx consisting of four to eight triangular, rust-brown sepals and form second-order umbel rays and small brownish-yellow flower spikes.⁴

Apart from grain and flax, the papyrus plant was probably the most important crop in ancient Egypt. Its economic significance was so great that it became the hieroglyphic

symbol of “Lower Egypt” ( and ) as early as the Predynastic Period.⁵ The Egyptians used the sturdy stems and umbel rays to make all kinds of woven items (walls, roofs, boats, furniture, mats, ropes, baskets, sandals, etc.).⁶ The writing surface made from the stem pith, which was cut into strips and pressed, has become a veritable symbol of ancient Egypt’s culture of writing.⁷ The stem pith was also used to treat wounds, and papyrus ash

⁴ Ref 6; Ref 7.

⁵ Ref 8, p 562.

⁶ Ref 7; Ref 9, pp 82–83; Ref 10, cols 670–671.

⁷ The modern term “paper” is derived from the Greek name for the papyrus plant, pápyros [πάπυρος],

was taken internally as a remedy for gastrointestinal disorders and insomnia.⁸ The rhizome was eaten as a vegetable.⁹ Today, due to intensive agricultural use of the riparian zones, there are virtually no natural papyrus occurrences left in Egypt.¹⁰

The papyrus plant is unmistakable in the wall paintings and reliefs found in ancient Egyptian tombs. It appears there primarily in the canonical scenes of fishing and fowling in the papyrus thicket and in scenes depicting the harvest of papyrus (Fig. 2 d–f). Typically, papyrus plants were depicted in a more or less stylized manner – individual, tall stems clearly separated from one another, with bell-shaped umbels (🌿). It was not uncommon for papyrus plants to be depicted with buds resembling water lily buds (🌸), even though papyrus does not actually have buds of that shape.¹¹ Nevertheless, buds were indispensable as symbols of renewal. These forms are also found in the papyrus column, which was particularly popular in New Kingdom temple architecture.¹²

In the *sema tawy* motif, Lower Egypt is represented by three or seven bundled papyrus stems. They emerge from a formation of zigzag lines (= water) to picture the plant's natural riparian habitat (Fig. 1 b–d).



a) Papyrus plants



b) Papyrus thicket



c) Papyrus umbel

although, of course, other plants were used in other parts of the ancient world to produce a paper-like writing material (Ref 11).

⁸ Ref 7; Ref 9, p 83; Ref 10, cols 670–671; Ref 12, cols 667–670. „*Bappirus*“ (papyrus) is also mentioned as a wound-healing herb in medieval pharmaceutical texts (Ref 13, p 185). Modern research has confirmed that *Cyperus papyrus* contains anti-inflammatory compounds that accelerated wound healing in animal studies (Ref 14).

⁹ This is what Theophrastus, Herodotus, and Diodorus reported (Ref 9, pp 81–82).

¹⁰ In other African countries with wetlands, this plant continues to be of great economic importance (Ref 15).

¹¹ Ref 7.

¹² Ref 16, pp 25–43. Sculptors of the Old Kingdom apparently used papyrus columns rather than natural plants as models for the *sema tawy* motif, as they carved cord-like rings beneath the umbel or flower (Ref 16, figs in pp 30, 32–42).



d) Scene of fowling in the marsh in the tomb of Nebamun, West-Thebes, 18th Dyn.



e) Scene of a papyrus harvest in the tomb of Nefer, Saqqara, 5th Dyn.



f) Papyrus stems in the tomb of Queen Tausret and King Setnakht, Kings' Valley, 19th Dyn.

Fig. 2: Papyrus in nature und art

3 Upper Egypt: The puzzling “lily”

The plant that represents Upper Egypt in the *sema tawy* motif, too, is pictured as a cluster of three or seven stems. In detailed depictions, the flower emerges from a calyx with short sepals. The petals had puzzled many authors.¹³ For example, G. Schweinfurth, a natural historian and expert on the flora of ancient Egypt, wrote that he had mulled over the question of the plant's natural model for half a century but had not arrived at a satisfactory solution.¹⁴ H. G. Evers described the flower as “*sonderbar*” (peculiar).¹⁵ H. J. Kantor suspected a completely fictional plant.¹⁶ Depending on the historical period, two variants of the flower of the symbolic plant of Upper Egypt (SPUE) can be distinguished – the  type from the Old Kingdom, which H. Schäfer called “*winde*” (vetch, Fig. 1 b, left plant),¹⁷ and the  or  type from the Middle Kingdom onward, which he called “lily” (Fig. 1 c, d).¹⁸ Ancient Egyptian artisans omitted the leaves of the SPUE as insignificant or distracting, which makes identification difficult.¹⁹ They seem to have based its recognizability entirely on its flower. The message of the *sema tawy* motif is linkage. To emphasize it, the central stem of the papyrus plant was depicted, contrary to biological reality, as being just as flexible as the central stem of the SPUE. Conversely, in other

¹³ Ref 17, pp 104–112.

¹⁴ G. Schweinfurth, cited in Ref 17, p 102 (after Keimer 1924).

¹⁵ Ref 3, plt 117.

¹⁶ Ref 17, p 112.

¹⁷ Ref 2, p 80. See also the drawings in Ref 17, pp 92–93, figs III.3–III.9.

¹⁸ Ref 2, p 80.

¹⁹ Cf. Ref 2, pp 80–81.

contexts, the latter may have long, straight stems like those of papyrus (Fig. 3 f).

The common identification of the SPUE as a lily (“lily of the south”)²⁰ is untenable. Members of the lily family (*Liliaceae*), which also includes tulips, do not grow in the latitudes of Egypt.²¹ That would be possible only if Mediterranean lily species such as Madonna lilies (*Lilium candidum*) or *Lilium chalcedonicum* had been introduced to Egypt from the eastern Mediterranean or the Middle East in the late 4th millennium BC. And if so, the Egyptians would hardly have chosen this foreign plant as the SPUE. Furthermore, the Egyptian artisans would certainly have depicted the lily flower with its prominent

anthers (), just as the ancient Minoans did.²²

Other authors have identified the SPUE as the “lotus,” a claim that also does not hold up to closer scrutiny. The typical lotus flower in ancient Egyptian art was actually a water lily of the genus *Nymphaea*. The anthers of a *Nymphaea lotus* flower can form a bud-like structure in the center, but its lanceolate petals are not curved outward. Its sepals are similar in shape and almost as long as the petals. The same applies to *Nymphaea caerulea*. Thus, the *Nymphaea* flowers have little in common with the flower of the SPUE, whether it be the “vetch” type or the “lily” type. Compare the hieroglyphs  and .²³ Most notably, the SPUE has never been depicted standing in water, in people's hands, or as part of a bouquet.

I suggest that the SPUE in the *sema tawy* motif is a legume (bean, pea, chickpea, or lentil). Legumes belong to the *Fabaceae* family, formerly known as *Papilionaceae*. A papilionaceous (butterfly-like) flower consists of a large, two-lobed standard petal with an outwardly curved margin; a pair of straight, protruding wing petals that resemble a bud when closed; and another, inner pair of keel petals that enclose the pistil and anthers. The latter are only visible when the wing petals are spread apart. When viewed from the side with the wing petals closed, the papilionaceous flower is quite comparable to the “lily” type () flower of the SPUE (Fig. 3 a, b). Furthermore, the calyx and buds of the SPUE, if any, resemble those of a bean or pea flower.²⁴ The open flower of the lentil (*Lens culinaris*) is a reasonable model for the “vetch” type () flower of the SPUE from the Old Kingdom (Fig. 3 c).

²⁰ E.g., Ref 2, pp 80–81; Ref 16, pp 18–20; Ref 17 (see the drawings on pp 100–101, figs III.41–III.51).

²¹ Ref 18, p 225, fig 5. Cf. Ref 16, p 20.

²² See the Madonna lilies in ancient Minoan frescoes, such as the “Spring fresco” in Akrotiri (National Archaeological Museum, Athens, inv. no. AKP 1977.29).

²³ See also Ref 19.

²⁴ Ref 16, pp 18 (fig 31), 19 (fig 33), 22 (fig 37).

Viewers, who are accustomed to seeing spatiality and perspective in two-dimensional works of art, will not agree with this hypothesis at first glance. However, in ancient Egyptian imagery, the depiction of an object is always non-perspectival, simplified, and emphasizes the essential, even if the result is biologically or architecturally inaccurate.²⁵ Two of the key characteristics of a papilionaceous flower are the outwardly curved edge of the two-lobed standard petal and the bud-like shape of the closed wing petals. Apparently, ancient Egyptian artisans regarded this seemingly tripartite structure, as viewed from the side, as a distinctive feature (Fig. 3 a, b). In the New Kingdom, the curvature of the standard petal of the SPUE was sometimes exaggerated (Fig. 3 d). Occasionally, a ring-shaped structure is depicted in the center of the flower (see the fourth upright flower from the right in Fig. 3 e). This could be the exposed keel petals of a fully open papilionaceous flower, which often form a ring-shaped or boat-like structure when their tips are fused together. However, it is difficult to understand why the pods, of all things, were not considered worth depicting.²⁶ The flower of the legume was likely intended to serve as a fitting counterpart to the papyrus umbel. In examples from the Late New Kingdom, the flower may feature lateral appendages.²⁷ Perhaps these were intended to represent the pods, even if their placement is rather arbitrary. In any case, the pods and seeds of legumes at that time were much smaller than those of today's cultivated varieties.

Legumes are among the earliest domesticated plants in the world. Archaeological finds and ancient texts confirm that field beans, Egyptian peas, lentils, and lupines were cultivated in Upper Egypt.²⁸ The sandy-loamy, well-drained soils of pharaonic Upper Egypt were ideal for growing legumes. In the Nile Delta, legumes did not gain significance until the advent of the Naqada III C culture.²⁹ Since legumes are inedible when raw, they may have been eaten as a cooked porridge or stew, or used as an ingredient in the preparation of certain types of bread and cakes. This makes it impossible to identify them among the food offerings painted on the walls of tomb chapels. Bean sprouts may also

²⁵ For example, in the *sema tawy* motif, the number of plant stems above and below the knot often does not match (e.g., Ref 3, plts 67, 117; Ref 20, p 25, fig 1). Such biological inconsistencies also include the "papyrus buds" mentioned on page 4.

²⁶ A legume bears both flowers and pods at the same time.

²⁷ See Ref 16, p 19, figs 33, 34. L. Borchardt suspected an imaginative elaboration under Asian influence (ibid., p 19). Even the Egyptians may no longer have been aware of the natural model of the SPUE at that time (Cf. Ref 17, p 102).

²⁸ Ref 21, pp 362–363; Ref 22, pp 201, 202; Ref 23, pp 255–259; Ref 24; Ref 25, pp 87–89, 96–97, 155–153, 165–166; Ref 26, p 152; Ref 27, p 82 (tbl 1); Ref 28, p 12; Ref 29, p 287. Diodorus Siculus reported on "vegetables which grow on stalks" (Diodorus, 34.3 [Ref 30, p 115]). In archeobotanical research, the importance of legumes may be underestimated because peeled, cooked and charred pulses are difficult to identify (Ref 31, p 107).

²⁹ Ref 31, pp 106 (fig 3a), 107. In the Pre- and Early Dynastic Periods, the Nile Delta was partly marshland which is unsuitable for growing legumes.

have been in high demand.³⁰ Legumes ensured proper protein supply, since the protein profiles of legumes and grains complement each other perfectly.³¹ Nevertheless, they seem to have played only a minor role in the rations for workers and soldiers.³² As far as beans are concerned, this might be related to a hereditary disorder called favism. It affects a small percentage of men in countries around the Mediterranean and leads to hemolysis and jaundice after the ingestion of field beans (fava beans).³³ This could also explain why Herodotus claimed that the ancient Egyptians avoided beans.³⁴ On the other hand, in the New Kingdom lentils, peas, and shelled beans were part of the king's travel victuals.³⁵ To this day, dishes made from legumes (ful medames, ta'amiya, loubiyya, and koshary³⁶) are staple foods in Egypt.

Another, older SPUE () has side shoots and is traditionally identified as a rush or sedge.³⁷ It served as the hieroglyphic ideogram for "Upper Egypt" and "king (of Upper Egypt)" from the Predynastic Period onward, but was rarely used in the *sema tawy* motif.³⁸ Interestingly, its flowering version, which has also been documented since the

Predynastic Period,³⁹ has "lily" type flowers (). However, in a tomb relief from the 5th

Dynasty it is shown with multilobed flowers ()⁴⁰ like a plant depicted in desert

hunting scenes from the same period ()⁴¹. This desert plant is somewhat similar to a flowering rush (e.g., *Juncus fontanesii* or *Bolboschoenus glaucus*, the tuberous bulrush),

³⁰ Ref 32, p 61, cited from Papyrus Anastasi III A (Ref 33, p 52, line 15,11).

³¹ Ref 34.

³² E.g., Ostrakon Berlin 11238, 3-5; Ostraca UC 39661, UC 39651, UC 39624, UC 39625, UC 39626, UC 39630, UC 39645, and UC 39651 from Deir el-Medina; Ostrakon Gardiner 59, 4; Papyrus Turin 1880 recto 2, 2-4; 3, 17-18; Ref 35, p 144; Ref 36; Ref 37; Ref 38; Ref 39, pp 83-109. However, in rations lists, legumes may have been grouped together with other garden produce under the term "vegetables" (*j3qt* or *sd/f3*). A. Touzeau did not provide a source for her claim that pulses were among the rations of the pyramid builders at Giza and craftsmen at Deir el-Medina (Ref 40, p 115).

³³ Ref 41.

³⁴ Cited in Ref 9, p 212.

³⁵ Ref 32, p 61, cited from Papyrus Anastasi III A (Ref 33, p 52, lines 15,11-16,1). There is no reason to assume that this applied only to the New Kingdom.

³⁶ According to A. Halawa, koshary is based on an ancient Egyptian lentil dish (Ref 42, p 5).

³⁷ Ref 1, p 437; Ref 8, p 570; Ref 17, p 105.

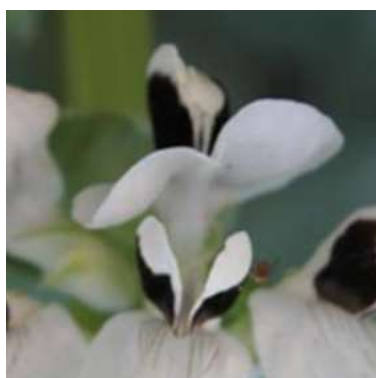
³⁸ King Khasekhemwy, 2nd Dynasty (Ref 17, p 91, figs III.2A and III.2B; Ref 43, plts 37, 38); King Khafre, 4th Dynasty (Ref 4, CG 11).

³⁹ Ref 8, pp 573-574.

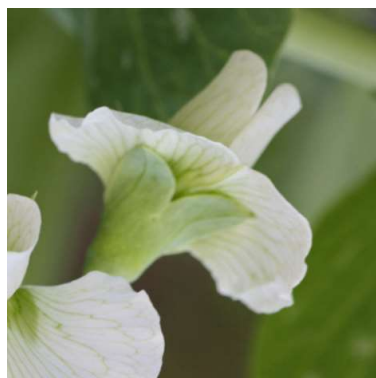
⁴⁰ Tomb of Ptahhotep and Akhethotep, Saqqara, 5th Dynasty (Ref 44, plt 10 [176, 180, 182]).

⁴¹ E.g., tomb of Ptahhotep and Akhethotep, Saqqara, (Ref 44, plt 22 [bottom right]); mastaba of Raemka, Saqqara (MMA 08.201.1g); mortuary temple of King Sahure, Abusir (Ref 45, plt 17); sun temple of King Niuserre (Ref 46, plt 11 a, b).

but it was most likely not considered a particularly noteworthy plant, and certainly not a SPUE.



a) Field bean (*Vicia faba*)



b) Pea (*Pisum sativum*)⁴²



c) Lens (*Lens culinaris*)



d) The SPUE on a pillar of Thutmose III, temple of Karnak, 18th Dyn.



e) The SPUE in the tomb of Queen Tausret and King Setnakht, Kings' Valley, 19th Dyn.



f) The SPUE between papyrus stems in the temple of Edfu, Ptolemaic Period

Fig. 3: The symbolic plant of Upper Egypt (SPUE) in nature and art

⁴² The Egyptian pea (*Sesbania sesban* var. *aegyptiaca*) has red and yellow mottled flowers also found in the floral arrangements on mummies (Ref 22, p 189); the chickpea has light purple flowers. There is currently no evidence that *Pisum sativum* was cultivated in ancient Egypt. The photo in Fig. 3 b is intended to illustrate the seemingly tripartite structure of the papilionaceous flower as seen from the side.

Abbreviations

ASAE: Les Annales du Service des Antiquités Égyptiennes; BC: before Christian era; Ber. Dtsch. Bot. Ges.: Berichte der Deutschen Botanischen Gesellschaft; BM: British Museum; Bot. Jhrb. Syst.: Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie; BSI: Bibliothèque Scientifique Internationale; CC: Creative Commons; Cereal Chem.: Cereal Chemistry; Cf.: Compare; CG: Catalogue Général des Antiquités Égyptiennes du Musée du Caire; chpt: chapter; cols: columns; Dyn.: Dynasty; eds: editors; GOF: Göttinger Orientforschungen, IV. Reihe, Ägypten; inv. no.: inventory number; J. Arch. Sci.: Journal of Archaeological Science; JE: Journal d'Entrée (du Musée du Caire); J. Ethn. Foods: Journal of Ethnic Foods; fig/figs: figure(s); MDAIK: Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo; MMA: The Metropolitan Museum of Art; New Engl. J. Med.: The New England Journal of Medicine; OINN: Oriental Institute News & Notes (Chicago); p/pp: page(s); Phar. Biomed. Res.: Pharmaceutical and Biomedical Research; plt/plts: plate(s); Ref: reference; SDAIK: Sonderschrift des Deutschen Archäologischen Instituts, Abteilung Kairo; SPUE: Symbolic plant of Upper Egypt; tbl: table; Veg. Hist. Archaeobot.: Vegetation History and Archaeobotany; Vol.: Volume; WVD OG: Wissenschaftliche Veröffentlichungen der Deutschen Orientgesellschaft.

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46. F. W. von Bissing (1955), La chambre des trois saisons du sanctuaire solaire du roi Rathourès (Ve dynastie à Abousir) (ASAE 53; Cairo).

Photo credits

- Fig. 1: a) *Sema tawy* motif on a pottery fragment, tomb of King Andjib, Abydos, 1st Dyn. Drawing: Ref 2, p 75, fig 2, after Amélineau 1896 (CC 0).
- b) *Sema tawy* motif on the throne of a seated statue of King Khafre, Gizeh, 4th Dyn. Photo: Ref 16, p 21, fig 36 (CC 0).
- c) *Sema tawy* motif with Horus and Seth on the throne of a seated statue of King Senwosret I, El-Lisht, 12th Dyn (Cairo JE 31139). Photo: <https://egypt-museum.com/relief-of-horus-and-seth> (CC BY-SA 3.0; accessed July 2, 2026).
- d) *Sema tawy* motif with Nile gods, temple of Luxor, 18th Dyn. Photo: Olaf Tausch, https://commons.wikimedia.org/wiki/File:Luxor_Tempel_15.jpg (CC BY 3.0; accessed July 2, 2026).
- Fig. 2: a) Papyrus plants: Photo: The Pepper Pantry, https://thepepperpantry.com/products/20-cyperus-papyrus-paper-reed-water-plant-egyptian-nile-grass-yellow-flower-seeds?srsId=AfmBOorVxgUSfSxNfxO_hd7zYJ9Q5Tk20DUmX3UhtD-W3Sntt3GFGJv_ (with kind permission; accessed June 28, 2026).

- b) Papyrus thicket. Photo: The Royal Horticultural Society, <https://www.rhs.org.uk/plants/5206/cyperus-papyrus/details> (with kind permission; accessed June 28, 2026).
- c) Papyrus umbel. Photo: Hortica, <https://hortica.de/pflanzen/echter-papyrus> (CC BY-NC; accessed June 28, 2026).
- d) Scene of fowling in the marsh in the tomb of Nebamun, West Thebes, 18th Dyn (BM EA37977). Photo: The British Museum, https://www.britishmuseum.org/collection/object/Y_EA37977 (CC BY-NC-SA 4.0; accessed July 2, 2026).
- e) Scene of a papyrus harvest in the tomb of Nefer, Saqqara, 5th Dyn. Photo: Egypt Museum, <https://www.facebook.com/Egypt.Museum/posts/men-harvesting-papyrus-reeds-in-the-tomb-of-nefer-at-saqqaraold-kingdom-5th-dyna/821218203367104> (accessed July 2, 2026).
- f) Papyrus stems in the tomb of Queen Tausret and King Setnakht, Kings' Valley, 19th Dyn. Photo: Bruno Sandkühler, <https://papyrus-magazin.de/kultur/wer-weiss-schon-was-sema-tawy-ist> (with kind permission; accessed July 22, 2026).

Fig. 3: a) Field bean (*Vicia faba*). Photo: private.

b) Pea (*Pisum sativum*). Photo: private.

c) Lens (*Lens culinaris*). Photo: Christiaan Kooyman, https://commons.wikimedia.org/wiki/File:Lens_culinaris_flowers.jpg (CC BY-SA 3.0; accessed July 2, 2026)

d) The SPUE on a pillar of Thutmose III, temple of Karnak, 18th Dyn. Photo: private.

e) The SPUE in the tomb of Queen Tausret and King Setnakht, Kings' Valley, 19th Dyn. Photo: Bruno Sandkühler, <https://papyrus-magazin.de/kultur/wer-weiss-schon-was-sema-tawy-ist> (with kind permission; accessed July 22, 2026).

f) The SPUE between papyrus stems in the temple of Edfu, Ptolemaic Period. Photo: <https://buffaloah.com/a/virtual/egypt/edfu/birth/source/7.html> (with kind permission; accessed July 14, 2026).