

Written records from the Thinite period

Interpretations and comments on selected examples

Part 3

Eva Traunmüller, Austria¹

Contents

4	Further selected examples.....	1
4.1	Product labels from the tomb of King Scorpion I	1
4.2	A product label from the reign of King Den.....	4
4.3	A seal impression from the time of King Khasekhemwy.....	9

4 Further selected examples

In this third part, I will discuss additional labels from the reign of Predynastic King Scorpion I; a label from the reign of First Dynasty King Den; and a cylinder seal impression from the reign of Second Dynasty King Khasekhemwy.

The statements under the heading "Hypothesis(es)" are my own speculations,² unless their source is cited.

4.1 Product labels from the tomb of King Scorpion I

The following two labels were found in the tomb of King Scorpion I in Abydos (Umm el-Qaab, Tomb U-j, c. 3150 BCE). This tomb yielded many such small labels, which are considered the earliest written records in Egypt.

¹ Correspondence to: eva.traunmueller@gmx.net

² I was not aware of any previously published opinions that coincide with my hypotheses.

4.1.1



This label features a duck-like bird above a long, curved structure. The curved structure brings to mind associations with a watercourse or canal. However, there is no hieroglyph that resembles this structure. Additionally, no Egyptian nome is known to have used a duck or goose as its symbol.

G. Dreyer (1998) interpreted the curved structure as a throwing stick.³

Objection/hypothesis:

The shape of a throwing stick must adhere to immutable physical laws. Therefore, it is impossible for a predynastic throwing stick to differ fundamentally in shape from those of later eras. During the New Kingdom, Egyptian throwing sticks were slightly bent boomerangs,⁴ or sticks shaped like snakes⁵. The typical throwing stick of Levantine foreigners is perpetuated in the hieroglyph  [T14].

The bird on the label is likely the phonogram  (duck [G39]) with the phonetic value *zʾ*. On the coast of the Red Sea near the mouth of Wadi Gawasis lay an ancient Egyptian port, whose name was spelled      *zʾw.w* (modern Mersa Gawasis). It served as a shipyard and transshipment station for southerly voyages down the Red Sea coast.⁶ Most of the ancient artifacts found at Mersa Gawasis date back to the Middle Kingdom. However, paleoenvironmental evidence suggests that the bay has steadily shrunk over the millennia due to the accumulation of aeolian and river sediments. Therefore, any predynastic port site would be farther from the Middle Kingdom site and deeply buried under sediments.⁷ The toponym      *zʾw.w* could be translated as “twigs,

³ Ref 1, p 177.

⁴ Throwing stick of Tutankhamun, Cairo JE 61614.

⁵ Throwing sticks depicted in the canonical „fowling in the papyrus thicket“ scene in the wall decorations of the tombs of Nebamun (TT 179), Menna (TT 69), Nakht (TT 52), Suemniut (TT92), Khnumhotep II (BH 3), and many others.

⁶ Ref 2, pp 161–164, 256 (fig 24).

⁷ Ref 29, pp 113–114.

branches.”⁸ It may refer to the mangrove forests that grew in the paleo-bay at Mersa Gawasis, as evidenced by archaeological findings.⁹ In that case, the structure on the label would be the curved stilt root of a mangrove tree, which is partially submerged in water.¹⁰ Alternatively, the curved structure might be a pier. While there are no remains of an ancient curved pier at Mersa Gawasis, there is one at the highly similar port facility of Wadi al-Jarf, located a little further north.¹¹

4.1.2



These two labels depict a crested ibis (*Lophotibis cristata*) and a mountain range. The bird's crest is exaggerated to clearly distinguish it from other birds that may appear on labels, such as herons or storks. The ibis hieroglyph  [G25] served as a phonogram with the phonetic value *ḥ*. The ibis stands on the hieroglyph  (mountain range [N25]), which, on predynastic labels, is often depicted with four summits.¹² It was an ideogram and a classifier for a mountainous area, desert, and/or foreign country. Alternatively, the first two triangles represent the feet of the ibis, and the remaining, slightly higher two triangles form the phonogram  (mountain [N26], phonetic value *ḏw*).

Hypothesis:

Assuming that the inscription on the label is a toponym and that the two signs are phonograms, the toponym would be *ḥḏw*. To my knowledge, this toponym is not mentioned in any later texts. If the two signs are logograms, they could refer to a predynastic precursor of the “ibis nome” (15th Lower Egyptian nome). However, this nome was not considered foreign territory, and it is neither hilly nor does it border a

⁸    *zʾw.w* „branches, twigs“ (Ref 13, p 710 [25891]). Although the classifier  [D3] actually is the image of strands of hair, its shape suggests that the term *zʾw.w* refers specifically to the stilt roots of mangrove trees.

⁹ Ref 29, pp 114, 128.

¹⁰ See the photo of the mangrove forests along Egypt's Red Sea coast (Ref 30).

¹¹ Ref 3, pp 5, 7 (fig 8). Artifacts from Wadi al-Jarf, which date back to the Fourth Dynasty, are *termini ante quem* for the construction of this port.

¹² Ref 4, p 624.

desert.

A more geographically appropriate toponym is  (*j*)*ḥ.t*. Although the syllable *ḥ* with the weak prefix *j* is written with single consonant signs in textual evidence from the Old and New Kingdoms,¹³ the meaning of the name, "The Shining," reveals its relationship with the word  *ḥ.t*, "land of light," "horizon."¹⁴ According to K. Zibelius (1957)¹⁵ and J. Cooper (2015),¹⁶ the place called (*j*)*ḥ.t* was most likely located along the Wadi Hammamat, which extends from Koptos through the eastern desert to the 5,000-year-old port town of *ḥ.w* on the Red Sea (modern al-Qusair). The Wadi Hammamat was a caravan route and a mining area for graywacke of a particularly sought-after quality.¹⁷ Rock carvings from the fourth millennium BCE suggest that the wadi may still have carried water at the time of King Scorpion I.¹⁸ Its entrance near Koptos at sunrise is the perfect natural model of the hieroglyph  (sun rising over a valley [N27]), which served as an ideogram for *ḥ.t*, the "land of light" on the eastern horizon.¹⁹ The  classifier does justice to the partly mountainous Eastern Desert. In contrast, G. Goyon (1957) identified the toponym  (*j*)*ḥ.t* as a non-specific term for the Levant.²⁰ It is entirely possible that the label marked a Levantine commodity because under King Scorpion I, Egyptian trade networks demonstrably extended to Syrian-Palestinian territories.²¹

4.2 A product label from the reign of King Den

King Den belonged to the mid-First Dynasty. He reigned around 2970 BCE. Labels from this period depicted symbolic scenes from the king's reign and were thus larger than those from the Predynastic Period.

¹³ These texts include an expedition inscription from the time of King Djedefre (Dyn. 4) and the topographical list on the seventh pylon (Tutmosé III) of the Karnak Temple (Ref 5, p 802 [no. 155]).

¹⁴  (*j*)*ḥ* „to be shining;“  or  (*j*)*ḥ.w* „(blaze of) light;“  or  „land of light“, "horizon" (Ref 13, pp 11 [358], 12 [401], 23 [792]).

¹⁵ Ref 6, p 91.

¹⁶ Ref 2, pp 109, 110–111.

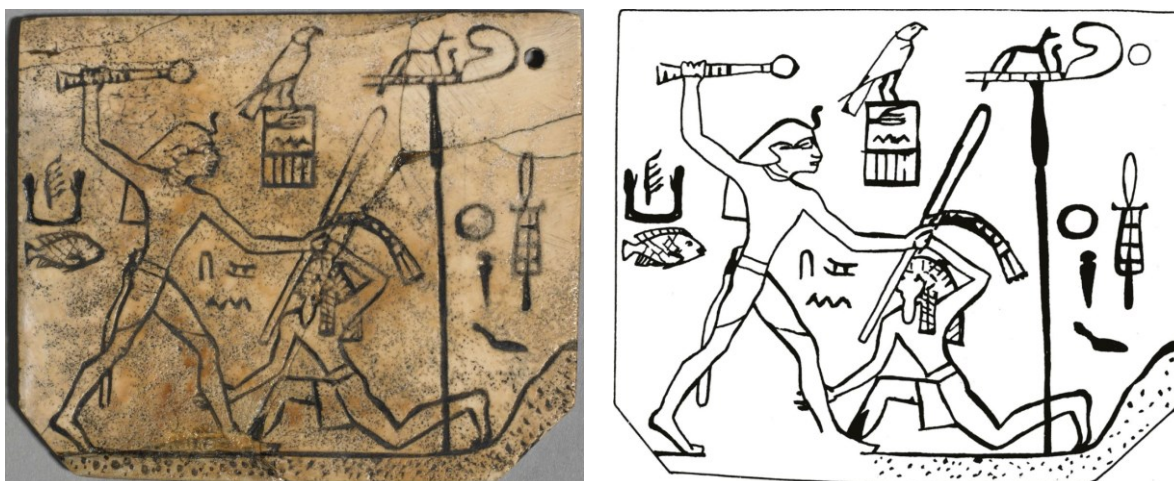
¹⁷ Ref 7, pp 359–363.

¹⁸ Ref 8, pp 868–869.

¹⁹ Ref 2, p 110, fig 11; Ref 13, p 12 (401).

²⁰ Ref 9, p 13.

²¹ Ref 10, *passim*. The tenth chamber of Skorpion I's tomb contained at least 173 imported wine jars from Syria-Palestine (Ref 11, p 131, fig 14.7; Ref 12, pp 11–12).



Product label from the reign of King Den, front side, Dyn. 1, c. 2985 BCE, ivory, length 5.3 cm, width 4.5 cm, from Abydos, British Museum EA55586.

4.2.1 Scene

The most prominent figure on the label is King Den. He wears a headdress similar to the *nemes* headdress with an uraeus, and a kilt with an animal tail. He raises his mace to strike his opponent, whom he holds by the head in the iconic "smiting the enemy" pose. His opponent is already kneeling on the ground, defeated, but still has his long club raised threateningly and is reaching for Den's front leg. Above the two figures, centrally positioned, is the *serekh* of King Den. The scene's dotted ground surface rises to a hill on the right-hand side. It depicts a mountainous desert area. Next to the enemy stands a standard of Wepwawet, the canine god of war.

The back of the label is engraved with a pair of sandals.

4.2.2 Hieroglyphic inscriptions

4.2.2.1



The Horus falcon on the king's *serekh* faces the same direction as the king. The king's Horus name *dn* (Den) is written using the single-consonant signs  (hand [D46]) for *d* and  (rippled water surface [N35]) for *n*. The name could be translated as *dn(.j)* "one

who mutilates."²² The decapitated and emasculated prisoners of war depicted on the back of the Narmer Palette are evidence of this practice.²³

4.2.2.2



The combination of signs near the left edge of the label consists of the following:

- 𓰡 (reed [M17]): phonogram for the semi-consonant *j*;
- 𓰶 (two arms [D28]): phonogram with the phonetic value *kʒ*;
- 𓦿 (bulti *Oreochromis niloticus* [K1]): phonogram with the phonetic value *jn* or classifier for fishes.

P. Kaplony (1963) rearranged this sequence of signs to *j-jn-kʒ*, which he believed was the personal name of an official, Inka.²⁴

Objection/hypotheses:

- 4.2.2.2-a I think officials in goods management were too insignificant to be permitted to write their names next to an image of the king. As with older, smaller labels, the inscription likely indicates the place of origin of the commodity: *j-kʒ-jn* or simply *j-kʒ*, if the sign 𓦿 is a classifier. A fairly equivalent toponym is *jkʒy.t*, which may have been abbreviated on the label. This mining district is commonly believed to have been located in the Eastern Desert of the Egyptian-Lower Nubian borderland known to the Egyptians as the land of *mdʒ* (Medja).²⁵ However, one author has suggested that the land of Medja reached further north, to the Eastern Desert of Upper Egypt.²⁶ In New Kingdom texts, the toponym *jkʒy.t* is spelled 𓦿𓰶𓰡𓰶𓰶𓰶 with bread instead of a fish as the classifier.²⁷

²² Ref 13, p 1053 (39007).

²³ See Part 1 of this work, section 2.3.

²⁴ Ref 14, vol 1, pp 381, 423; Ref 15.

²⁵ Ref 2, pp 115–119, 136–145.

²⁶ Ref 2, p 139, note 716, citing D. Michaux-Colombot (1992, 2004).

²⁷ Ref 2, p 115. Bread and fish were also interchangeable as classifiers in the words *dfʒ* or *dfʒ.t* “food” (Ref 13, p 1081 [39990, 39997]).

During the Thinite period, the sign  was also used as an abbreviation for  *jnj.w* “delivery” (literally: “that which was brought” [plural form]).²⁸ With this interpretation, the inscription may read *jk3(yt) jnj.w* “delivery from Ika(yt).”²⁹

4.2.2.2-*b* Perhaps the inscription indicates the type of commodity rather than its place of origin. In that case, it reads *k3-j(j)* “fish roe,” whereby the sign  was embedded between the arms of the sign  for aesthetic reasons.³⁰ The sign  is a classifier. The word was later spelled          

The suggested sequence is   and is read as *tm=sn* "They shall not exist."³⁵

Objection/hypothesis:

Exclamations and speech are highly uncommon on a product label. In general, speech was usually placed near the head of the speaker, who would be King Den in this example. The words of the enemy would not have merited a place on the label. It is thus more likely that the inscription refers to the name, tribe, or origin of the enemy.

My alternative interpretation of the inscription is as follows:

The sign on the left is the narrower-than-usual hieroglyph  (hobble for cattle [V20] with the phonetic value *md*. It has been attested since the early First Dynasty.³⁶ The sign on the right is not , but  (segment of an irrigation canal [N23]), a classifier for land, especially irrigated land. Incidentally, this is the earliest evidence of this sign. The third sign below is not , but . If I am correct, the inscription reads  . This could be an abbreviated spelling with two classifiers for the land of *mdj* (Medja), the land north and south of the Wadi Allaqi,³⁷ which was already mentioned in hypothesis 4.2.2.2-a.

4.2.2.4



The inscription to the right of the Wepwawet standard consists of the following hieroglyphs:

 (threshing floor with grain [O50]): phonogram with the phonetic value *zp* in the word *zp* meaning "case, example, opportunity";

 (dagger [T8]): phonogram with the phonetic value *tp*; it was used, among other things, as the ordinal number "first";

 (unknown object [Aa7]): phonogram with the phonetic value *sqr*; it was used, among other things, in the verb  *sqr* "to beat to death (with a mace)";³⁸

³⁵ Ref 15.

³⁶ Ref 4, p 772.

³⁷ Ref 2, pp 136–145.

³⁸ Ref 13, p 836 (30858).

𓏏 (spear emblem [R15]): ideogram for *j3b* "east" or "left."

The inscription 𓏏𓏏𓏏 may be transcribed as *zp tp <n>sqr <m> j3b(.t)* meaning "first occasion (of) smiting (in) the east."³⁹ The phrase refers only to the reign of King Den because, overall, Den was certainly not the first Egyptian king to wage war against the peoples of neighboring countries in the east. The ideogram 𓏏 for "east" was most commonly associated with the countries in the northeast. However, during Den's reign, the people of the land of Medja in the southeast possibly posed the greatest threat to the integrity of the Egyptian kingdom by attempting to expand their territory further north (see the hypothesis to image 4.2.2.3). Or conversely, King Den wanted to conquer the land of Medja because it is rich in mineral resources. Indeed, by the Old Kingdom, the Egyptians had begun mining gold and minerals in the Wadi Allaqi region, which is part of the land of Medja.⁴⁰ The assumption that the label depicts a military campaign in the southeast, rather than the northeast, is supported by the attributes of the enemy: a long, pointed beard, a voluminous headscarf with side flaps, and a very long club⁴¹. These attributes are not found in later depictions of warriors from the Sinai or Syrian-Palestinian regions, except in the rock reliefs from the Third and early Fourth Dynasties in Wadi Maghareh on the Sinai Peninsula.⁴² These reliefs contradict the above assumption, unless the early Old Kingdom sculptors were inaccurate in the iconography of foreigners, portraying Bedouin warriors from the Sinai (*š3s.w, mnt.yw*) with the attributes of a Medja warrior (*md3.y*).

4.3 A seal impression from the time of King Khasekhemwy

In order to do full justice to the term "Thinite period" in the title of this work, an example from the Second Dynasty must not be omitted. The following example is a cylinder seal impression on a clay fragment from the time of King Khasekhemwy. He reigned around 2740 BCE and is considered the last king of the Second Dynasty. Cylinder seal impressions are typically found on jar stoppers and cord seals made of unfired clay. Since such impressions are difficult to see in photographs, they are usually published as drawings.

³⁹ Ref 15; Ref 19, p 1736. Regarding the combination on labels of the sign 𓏏 *zp* with an ordinal number, see Ref 20, p 210.

⁴⁰ Ref 2, pp 50, 372.

⁴¹ The fringed cloth may be part of the enemy's headscarf, seized by King Den.

⁴² Ref 21; Ref 22, p 166, fig 31.

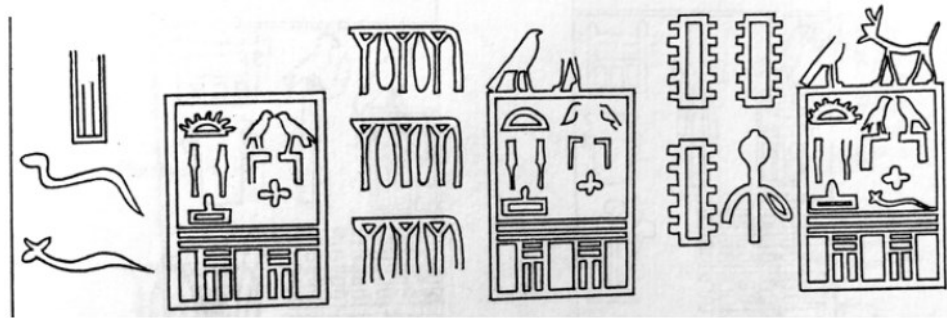


Fig. 1: Cylinder seal impression with *serekhs* of King Khasekhemwy, Dyn. 2, c. 2740 BC, clay stopper of a wine jar from his tomb in Abydos.

4.3.1 Hieroglyphic Inscriptions

The cylinder seal impression features three *serekhs* of King Khasekhemwy, accompanied by hieroglyphic inscriptions.

4.3.1.1



The three *serekhs* of King Khasekhemwy differ slightly in design. By this time, the king's title had become more complex, including an epithet. Above the middle and right *serekhs*, the Horus falcon and the Seth animal are depicted in the position usually reserved for Horus falcon alone. The two gods also appear in the name fields of all three *serekhs* in the form of divine standards. The text there consists of:

☀ (sun rays above hill [N28]): phonogram with the phonetic value *h*;

⚡ (scepter [S42]) in duplicate (dual): ideogram for „power“;

🍞 (bread loaf on offering mat [R4]): phonogram with the phonetic value *hṭp* in the ambiguous verb *hṭp* “to rest,” “to be satisfied,” or “to be gracious;”⁴³

🦅🐕 (Horus und Seth [E20]) on stylized standard boards;

+ a small isosceles cross;

and only in the right *serekh*: 🐍 (horned viper [I9]): phonogram for the consonant *f*.

The sequence of hieroglyphs ☀⚡⚡ *hṣj shm.wj* is the name of the king and means “the two powers appear.” The two powers are the gods Horus and Seth. W. Helck (1987) identified the small isosceles cross with the sign ⚡ [Z11]. Accordingly, his translation is:

⁴³ Ref 13, pp 611 (22153, 22162, 22166), 612 (22185).

 *h^cj shmwyj htp Hr Stj jmj=f*

„[The king] ,The two powers appear,‘ Horus and Seth rest in him.“⁴⁴

Objection/hypothesis:

I disagree with Helck's identification of the cross-shaped sign as the hieroglyph  [Z11]. Even on a stele of King Khasekhemwy,⁴⁵ the cross is small and isosceles, whereas the sign  appears exclusively as a tall sign with unequal cross arms in monumental hieroglyphic writing. Furthermore, as a prepositional nisba meaning *jmj* “inherent in,” the sign  cannot stand alone, as the small cross does in the left and middle *serekhs*. I suggest identifying the cross with the sign  (blossom [M42], phonetic value *wn*) instead.⁴⁶ My alternative translation is:

 *h^cj shmwyj htp Hr Stj wn(=f)*

„[The king] ,The two powers appear,‘ Horus and Seth are reconciled as long as he exists.“⁴⁷

It is possible that during the Second Dynasty, Egypt experienced a recurrence of the division into an Upper and Lower Egyptian political realm, symbolized by the myth of the rival gods Horus and Seth. One of Khasekhemwy's predecessors, King Peribsen, had the Seth animal depicted on his *serekh* instead of Horus. He was excluded from later king lists, which means that his reign was not acknowledged.⁴⁸ King Khasekhemwy was called “Khasekhem” (“The power appears”) in the early years of his reign.⁴⁹ There is some evidence that Khasekhem violently suppressed Lower Egypt's independence efforts.⁵⁰ It is conceivable that with his later name, Khasekhemwy, and the symbolic juxtaposition of Horus and Seth on his *serekh*, he wanted to demonstrate his rule over a reunited Egypt.⁵¹ He explicitly designated both gods as the patron gods of his kingship. Through the epithet *htp Hr Stj wn(=f)* (“Horus and Seth are reconciled as long as he exists”) he promised unity and peace throughout his reign, but it was also a warning to the rebels in Lower Egypt.

⁴⁴ Ref 23, p 118.

⁴⁵ Ref 24.

⁴⁶ Ref 4, p 579.

⁴⁷  *htp* „being reconciled,” or “being peaceable:” Ref 13, pp 611–612 (22166, 22169);  *wn*, fully spelled  „to be”, „to be there,” or „to exist:” Ref 13, p 207 (7440).  *wn(=f)* is an adverbial clause in this translation. If the pronominal subject ( “he”) is clear anyway, it was often omitted.

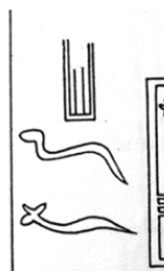
⁴⁸ Ref 25, pp 40–46.

⁴⁹ Artifacts found in the temple district of Hierakonpolis bear the name “Khasekhem,” while artifacts from the royal tomb in Abydos bear the name “Khasekhemwy” (Ref 4, pp 360–361; Ref 19, pp 1740–1741).

⁵⁰ Ref 22, p 87.

⁵¹ Ref 24; Ref 26, pp 317–328.

4.3.1.2



The first inscription on the left side of the seal impression consists of:

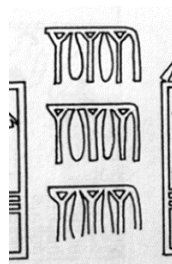
𐀓 (building façade [O131A]): classifier for special buildings;⁵²

𐀓 (cobra [I10]): phonogram for the consonant *d*;

𐀓 (horned viper [I9]): phonogram for the consonant *f*.

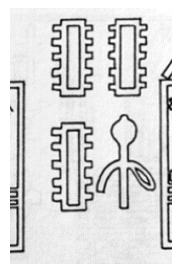
𐀓𐀓𐀓 means *jz df(3)* "food chamber." It is a term for a storehouse and/or administrative unit for food supply. This term appears in several other seal impressions from the Thinite period.⁵³

4.3.1.3



The second inscription displays the sign 𐀓 (grapes on a trellis [M43]) in a prototypical version with three stanchions supporting the trellis. It is a classifier for terms related to grapes, wine, and wineries. The triplicity indicates the plural form. Therefore, it says here: "Wineries."

4.3.1.4



The third inscription consists of:

𐀓 (wall [O36A]) in triplicate (plural form): ideogram for masonry;

⁵² Ref 4, p 659.

⁵³ Ref 4, p 545; Ref 13, pp 113 (3798), 1081 (39991); Ref 14, vol 1, p 158.

𓆎 (mace with round head and ribbon [T4]): variant of the phonogram 𓆎 [T3] with the phonetic value *ḥd*.

The inscription reads 𓆎𓆎𓆎𓆎 *jnb.w ḥd(.w)*, which translates to "White Walls." This was the earliest name of the city of Memphis. Memphis probably had a city wall made of light-colored limestone, which was plentiful in the area.

During the Predynastic Period, wine was a luxury good imported from the Levant.⁵⁴ Using grape vines from the Levant, the Egyptians began growing their own wine in the Nile Delta (e.g., Buto) and around Memphis in the early third millennium BCE.⁵⁵

In summary, the cylinder seal impression discussed above indicates that the clay fragment was part of a wine jar stopper from the royal wineries in Memphis. The jar was temporarily stored in a storehouse with others. After King Khasekhemwy died, the wine jars were delivered to the necropolis administration in Abydos for use as funeral goods.

Abbreviations

AncEg: Ancient Egypt; BCE: before Christian era; BH: Beni Hasan; BIE: Bulletin de l'Institut d'Égypte; CC: Creative Commons; Dyn.: Dynasty; ed/eds: editor(s); fig: figure; JARCE: Journal of the American Research Center in Egypt; JEA: The Journal of Egyptian Archaeology; KAW: Kulturgeschichte der Antiken Welt; NEA: Near Eastern Archaeology; p/pp: page(s); Ref/Refs: reference(s); Stud. Naut. Arch.: Studies in Nautical Archeology; vol/vols: volume(s).

References

1. G. Dreyer (1998), Umm el-Qaab I, Das prädynastische Königsgrab U-j und seine frühen Schriftzeugnisse (Mainz).
2. J. Cooper (2015), Toponymy on the Periphery: Placenames of the Eastern Desert, Red Sea, and South Sinai in Egyptian Documents from the Early Dynastic until the end of the New Kingdom (Thesis; Sydney).
3. P. Tallet, G. Marouard (2014), The Harbor of Khufu on the Red Sea Coast at Wadi al-Jarf, Egypt, in NEA 77 (1), pp. 4–14.
4. J. Kahl (1994), Das System der ägyptischen Hieroglyphenschrift in der 0.–3. Dynastie (Wiesbaden).
5. K. Sethe (1907), Urkunden der 18. Dynastie, Vol. IV/3 (Leipzig).
6. K. Zibelius (1972), Afrikanische Orts- und Völkernamen (Paris).
7. R. Klemm, D. D. Klemm (1993), Steine und Steinbrüche im alten Ägypten (Heidelberg, Berlin).
8. C. Meyer (1999), Wadi Hammamat, in K. A. Bard (ed) Encyclopedia of the Archaeology of Ancient Egypt

⁵⁴ Ref 27, p 30.

⁵⁵ Ref 12, pp 5–9; Ref 28, p 204.

(London).

9. G. Goyon (1957), *Nouvelles inscriptions rupestres du Wadi Hammamat* (Paris).
10. S. Mark (1998), *From Egypt to Mesopotamia: A Study of Predynastic Trade Routes*, in *Stud. Naut. Arch.* 4, pp. 1–181.
11. G. Dreyer (2011), *Tomb U-j: A Royal Burial of Dynasty 0 at Abydos*, in E. Teeter (ed), *Before the Pyramids: The Origins of Egyptian Civilization* (Chicago), pp. 127–136.
12. P. E. McGovern (1997), *The Beginnings of Winemaking and Viniculture in the Ancient Near East and Egypt*, in *Expedition Magazine* 39 (1), pp. 3–21.
13. R. Hannig (2006), *Großes Handwörterbuch Ägyptisch–Deutsch (2800–950 v. Chr.)*, Marburger Edition (KAW 64; Mainz).
14. P. Kaplony [1963], *Die Inschriften der Ägyptischen Frühzeit*, Vols. 1–3 (Wiesbaden).
15. The British Museum, Label EA55586, https://www.britishmuseum.org/collection/object/Y_EA55586 (accessed December 01, 2025).
16. L. Klebs (1915), *Die Reliefs des Alten Reichs* (Heidelberg).
17. D. Sahrhage (1998), *Fischfang und Fischkult im alten Ägypten* (KAW 70; Mainz).
18. A. J. Spencer (1993), *Early Egypt: The Rise of Civilization in the Nile Valley* (London).
19. S. Schott (1951), *Hieroglyphen: Untersuchungen zum Ursprung der Schrift* (Mainz).
20. W. Fritschy (2021), *A new interpretation of the Early Dynastic so-called ‚year‘-labels: ‚Balm labels‘ and the preservation of the memory of the king*, in *JEA* 107 (1–2), pp. 207–224.
21. Wikipedia The Free Encyclopedia, Sekhemkhet, [https://en.wikipedia.org/wiki/Sekhemkhet#/media/File:Sinai_\(997009158109105171\).jpg](https://en.wikipedia.org/wiki/Sekhemkhet#/media/File:Sinai_(997009158109105171).jpg) (accessed December 02, 2025).
22. R. Gundlach (1998), *Der Pharao und sein Staat: Die Grundlagen der ägyptischen Königsideologie im 4. und 3. Jahrtausend* (Darmstadt).
23. W. Helck (1987), *Untersuchungen zur Thinitenzeit* (Wiesbaden).
24. F. Raffaele, *Dynasty 2: Horus Khasekhem, Horus Seth Khasekhemwy Hotep-Neterwy-Imef, Nswtbity Nebty Khasekhemwy* (Nubkhetsen), <https://www.francescoraffaele.com/egypt/hesyra/Khasekhemwy.htm> (accessed November 22, 2025).
25. P. E. Newberry (1922), *The Seth rebellion of the 2nd Dynasty*, in *AncEg* 7, pp. 40–46.
26. J. Sainte Fare Garnot (1956), *Sur quelques noms royaux des seconde et troisième dynasties égyptiennes*, in *BIE* 37 (1), pp. 317–328.
27. D. Zohary (1997), *The Domestication of the Grapevine *Vitis vinifera* L. in the Near East*, in P. E. McGovern, S. J. Fleming, S. H. Katz (eds), *The Origins and Ancient History of Wine: Food and Nutrition in History and Anthropology* (2nd edition; Luxembourg), pp. 23–30.
28. T. James (2000), *The Earliest History of Wine in Ancient Egypt*, in: P. E. McGovern, S. J. Fleming, S. H. Katz (eds), *The Origins and Ancient History of Wine: Food and Nutrition in History and Anthropology* (2nd edition; Luxembourg), pp. 197–213.
29. K. A. Bard, R. Fattovich (2011), *The Middle Kingdom Red Sea Harbor at Mersa/Wadi Gawasis*, in *JARCE* 47, pp. 105–129.
30. China Global Television Network (2020), *Egypt's mangroves project contributes a triple win: official*,

<https://news.cgtn.com/news/2020-12-14/Egypt-s-mangroves-project-contributes-a-triple-win-official-Wd8U3Rcjmg/index.html> (accessed December 14, 2025).

Photo credits

Images in Chapter 4.1: Labels from tomb U-j at Abydos:

S. Kalyanaraman,

https://www.academia.edu/38037218/Hieroglyphs_of_ca_3200_BCE_on_bone_tags_from_Umm_el_Qa_ab_Abydos (accessed October 2, 2025).

<https://www.reddit.com/r/Alphanumeric/comments/1fyggf4/comment/lqw2ahc/?context=3> (accessed October 12, 2025).

Images in Chapter 4.2: Label from the reign of King Den (Dyn. 1). Photo and drawing: The British Museum, https://www.britishmuseum.org/collection/object/Y_EA55586 (accessed October 14, 2025; CC 0).

Images in Chapter 4.3: Cylinder seal impression from the reign of King Khasekhemwy (Dy. 2). Drawing after Ref 14, vol 1, fig 310.

.