

The Early Hieroglyphic Inscription at el-Khawy

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During surveys of the northern hinterland of the region of ElKab, in May of 2017 the ElKab Desert Survey Project (of Yale University and the Royal Museums of Art and History, Brussels) discovered a rock art and inscription site near the modern village of el-Khawy. The site comprises three major sections, with the images and inscriptions thus far identified dating from the Naqada I Period through the Old Kingdom. A prominent feature of the site is a large scale early hieroglyphic inscription datable to early Dynasty 0 (with the closest palaeographic parallels from Tomb U-j), revealing an early monumental use of the nascent script, indicating a politico-religious use of hieroglyphs already during their earliest period of use, and demonstrating a broader geographic reach for the script than surviving and thus far recognized examples have suggested.

Au cours de sa campagne de prospection au nord de la région d'Elkab, en mai 2017, le projet ElKab Desert Survey (mené par l'Université

de Yale et les Musées royaux d'art et d'histoire de Bruxelles) a découvert un site rupestre près du village moderne d'El-Khawy. Le site comprend trois secteurs principaux, avec des images et des inscriptions datées du Nagada I jusqu'à l'Ancien Empire. La caractéristique la plus marquante du site est une inscription hiéroglyphique de grande dimension se rapportant au début de la Dynastie 0 (suivant les parallèles paléographiques les plus proches provenant du matériel de la tombe U-j). Elle montre une utilisation monumentale de l'écriture à son stade le plus précoce, avec une connotation politico-religieuse dès cette époque, et une portée géographique plus large que ce que les exemples connus pouvaient suggérer jusqu'ici.

The area of the Eastern Desert closely encroaching on the narrow strip of cultivation between Esna and ElKab, although little explored for rock inscriptions due to the relatively poor quality of the sandstone in the region,¹ is not without evidence of Pre-

1. On the argillaceous sandstone of the region see Klemm & Klemm 2008: 7 & 167-172.



Fig. 1
View (looking east) of the rock inscription site of el-Khawwy.

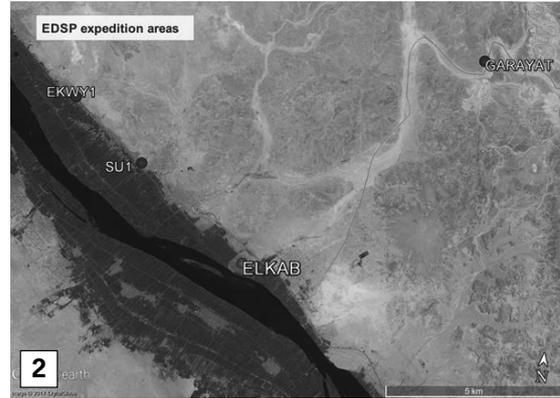


Fig. 2
Map of selected sites in the northern portion of the ElKab Desert Survey Project concession; EKWY1 is el-Khawwy, SU1 is Sheikh Uthman.

dynastic through Early Dynastic activity.² North of the Sheikh Uthman rock inscription site, at which figures prominently a tableau focusing on the name of the Horus Qa-a,³ on high rock faces vertiginously located above the modern railroad and adjacent roadway, are several closely associated panels of rock art and inscriptions (Fig. 1).⁴ This previously unknown site is located near the modern village of el-Khawwy, approximately 7 km north of the ancient city of Elkab and 60 km south of Luxor (Fig. 2). A hallmark of this rock inscription site is the large scale of a number of the images. For the most part, the inscriptions are predominately zoomorphic images of Naqada I date (prominent amongst these a great lapidary herd of elephants) augmented – and in some cases carved over in palimpsest – by

Naqada III/Dynasty 0 material. A final layer of inscriptions is a series of symbols and two personal names, one palaeographically of First Dynasty date, and another of the late Old Kingdom. The most important inscription at the northern end of the site dates to the final phase of the Predynastic Period (Naqada III/Dynasty 0). An overview of the basic sections of the site reveals three major segments, proceeding from south to north.

Naqada I Panel

The southernmost and largest of the panels of rock inscriptions at the el-Khawwy site is a “herd” of elephants, depicted at a large scale, apparently executed sometime during the Naqada I Period and no later than Naqada IIB (Fig. 3).⁵ One of the elephants

2. Nothing, save the site of Zarnikh, appears in Porter & Moss 1937: 171; the map in *LÄ* 7 (map 4), lists only “Sarnich, Kilabija, and Nag el-Hammâm (II)” south of Esna/Contralatopolis; note also the list of sites in Kessler 1982: col. 396. Hendrickx (1995: map 5) lists el-Kelabiya, Sharawna el-Bahari, Sebaiya East, and Mahamid (note that the toponym Mamlâ Atua to the east is actually the el-Atouani to the south of Elkab – see Červíček 1974: 10, n. 101 regarding Resch’s misplacement of the toponym). According to Dirk Huyge (personal communication of Aug. 10, 2017), the site “Mamlâ – el-Atouani (Felsbildstelle A)” was entirely destroyed as of 2014.

3. Preliminary publication of the Qa-a serekh at Sheikh Uthman in Huyge 1984: 5-9 (there said to be at Sebaiya; see also Wilkinson 1999: 81, where the site is corrected as Nag el-Oqbiya); complete publication of the site by the authors forthcoming. For the desert interests of Qa-a see Darnell 2011: 1181; Regulski 2010: 45.

4. The ElKab Desert Survey Project of Yale University and the Royal Museums of Art and History, Brussels, (director J.C. Darnell, co-director D. Huyge) discovered the site in May of 2017. The work of the mission is funded by grants from the Egyptology Endowment Fund of the Department of Near Eastern Languages and Civilizations at Yale University. We thank all members of the Ministry of Antiquities for making our work possible. Stan Hendrickx and Dirk Huyge kindly read a draft of this article and offered helpful comments. For his considerable contributions toward the development and implementation of our digital epigraphic technique, of which the accompanying illustrations are the most recent products, the author thanks Mr. Alberto Urcia.

5. The elephants reveal the “mouse” ears and pendulous lower lip of the Naqada I-IIB depictions of elephants – see for the dating the discussion of the iconography of elephants in Predynastic Egyptian representations Friedman 2004: 151-164 – and the Naqada I parallel of the hippopotami with small hippopotami within them (see the following note) supports such a date as well.



Fig. 3a
Facsimile drawing of a panel with large elephant drawings at the southern end of the el-Khawy rock face.

Fig. 3b
Photograph of a depiction of a large, pregnant elephant from the panel at the southern end of the el-Khawy rock face.

has a smaller elephant depicted within its body, parallel to similar Naqada I images of hippopotami on a Naqada I White-Cross-Line vessel from Abydos tomb U-415,⁶ a manner of “x-ray” representation extremely rare in all periods of Egyptian art and probably intended to represent pregnant female animals in all examples.⁷ The wavy lines within the bodies of the leftmost and largest elephant, and the small elephant within the body of another, find their best parallel in a petroglyph at Kanais, in the Wadi Abbad.⁸ The twin upright ears and strongly upward curving tusks of the el-Khawy elephants also appear in an elephant at Vulture Rock (EK 64).⁹ A crude figurine, a pot-mark, and four petroglyphs from Hierakonpolis constitute the thus far recognized corpus of pachyderm iconography from Hierakonpolis.¹⁰ The existence of elephant burials at HK6 (dating to Naqada IIA-B) suggest that the rock artists almost directly across



the Nile at el-Khawy may have had the opportunity of seeing the animals in person, which – while wholly unnecessary for the production of rock art¹¹ – might have provided the artist of the el-Khawy petroglyphic elephant herd with inspiration. The elephant tableau at el-Khawy was carved slightly later than an earlier group of smaller

6. Hartmann 2003: 81-82 & fig. 5.

7. For the celestial goddess pregnant with the soon-to-be-born child sun within her womb, see already Schäfer 2002: 122-123 (the attempt of Dorman 1999: 83-99, to see in the New Kingdom examples a child atop a potter's wheel is strained; for the problem with his lexicography see Manassa 2007: 177-178 & n. 308). Note that the image of a solar deity within the solar disk, visually appearing as though the disk is transparent, is not uncommon as either textual description or iconographic representation – cf. Klotz 2006: chap. 7.

8. See Červíček 1974: 282; compare as well (for such lines in depictions of hippopotami there) Graff 2009: 214, no. 63 (from U-637 at Abydos; and compare her nos. 027 and 030 as well).

9. Huyge 1995: 252-253 & pls. 58B, 59B (no. 64.145); Huyge (personal communication) also notes Graff 2009: 228, no. 103 (also p. 1162, Am18 [there erroneously referencing no. 102]).

10. Friedman 2004: 158-161; a forthcoming work by F. Hardtke will address the Hierakonpolitian rock art; see now Hardtke 2013: 103-114.

11. *Contra* remarks such as those of Mills 2010: 53-54.

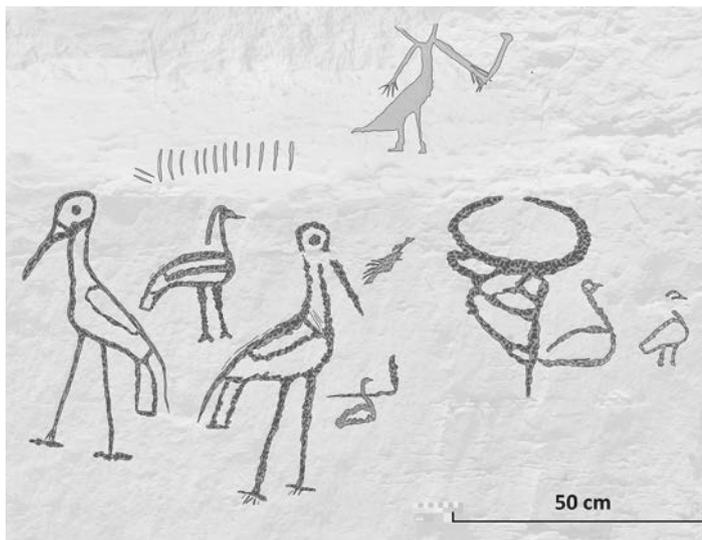
scale animals to the right (note the overlap of the rightmost elephant with the leftmost element in the earlier group [the hartebeest, with addax behind]). These perhaps only slightly earlier images include – to the far right – a feline.¹² At the lower left of this area of the site is a single Old Kingdom inscription, the title and name of the scribe Ses-hem-nefer. This Old Kingdom hieroglyphic inscription complements other “pseudo-hieroglyphic” signs present at the el-Khawy site, probably of similar date, in the Central Palimpsest area.

Fig. 4

Facsimile copy of the Dynasty 0 inscription with later carvings; the base photograph is shown below the line drawing to show the nature of the rock surface.

Central Area

Four groupings of images appear within the central area of the site, with several complex palimpsests. The major elements



date from the Naqada I Period through the First Dynasty. The most recent addition to the central area appears to be the personal name, palaeographically of First Dynasty date, of a woman Meret-Pe.¹³ Panels in this area of the rock face also bear multiple “pseudo-hieroglyphic” signs, often carved deeply into the surface. Similar signs appear at rock art sites throughout the region of Elkab,¹⁴ and are especially prominent at the Borg el-Hamam. The occurrence of pseudo-hieroglyphic marks – which can be related to similar signs on ceramic vessels – at distant Western Desert sites, such as Abu Ballas (southwest of Dakhla Oasis), suggests that rock inscriptions of this type may – amongst other things – be related to Old Kingdom caravans.¹⁵

At the upper left of the Central Area is a smooth area of rock bearing an early hieroglyphic inscription of five signs, which forms the chief focus of the present article. Atop the inscription is an oddly drawn human figure holding a stick and facing left, toward a row of primarily vertical strokes (Fig. 4).¹⁶ The three waterfowl, drawn without indication of legs – perhaps as though floating on water – appear to be later additions to the area of the Dynasty 0 inscription. The tip of the tail of the middle and largest of the three birds encroaches on the bucranium. The leftmost of the birds overlaps the second sign from the right in the early hieroglyphic inscription, a rearing serpent beneath the beak of the right stork.

12. The Umm Salam 40 Eastern Desert site has a petroglyph of a large-headed feline (Desert RATS CGP2135); note also as a partial parallel Červiček 1974: pl. 6.

13. For the shape of the *p*, see Regulski 2010: 584-587 (note the example in a domain name of Qa-a *ibid.*, p. 541). For the *mr*-sign, vertical orientation appears common to the First Dynasty – Regulski 2010: 652-654. The grouping recalls the odd *Nb.wy* name of Anedjib: Merpebia or Merbiapie; a close parallel for the el-Khawy name, albeit from the Late Period, is Ranke 1935: 158, n. 21: “die von (der Stadt) Pe Geliebte.”

14. For example, a roughly triangular mark with central vertical line from the Borg el-Hamam that is carved next to the name of a priest Hornakht also appears below the Sixth Dynasty inscription N 29 in the Wadi Hilal (Vandekerkhove & Müller-Wollermann 2001: pl. 65). Similar signs appear elsewhere at Wadi Hilal inscription sites (compare N 40, not the “Nachahmung einer Opfertischszene” as suggested in *ibid.*, p. 59).

15. Förster 2013: 310. See also Kaper 2009.

16. Parallels to the row of strokes also appear along the Abu Ballas Trail, and may there relate to accounting of days, perhaps spent on location by a patrol – see Förster 2015: 256-263 and references therein.

Leftmost Section

The leftmost elements at the el-Khawy rock inscription site present a palimpsest of which the earliest is the depiction of a late Predynastic boat, with details of deck structures and stem ornaments. Over this boat are carved at least three large horned quadrupeds, stylistically of a Protodynastic or Early Dynastic date. Details of this tableau must await the work of the coming field season.

Central Area: Protodynastic Panel

In the early Dynasty 0 panel at el-Khawy are five signs (Fig. 5); all but one of the signs – the left stork in the addorsed pair – face to the right, consistent with an order of reading from right to left (the dominant writing direction in later Egyptian texts). From right to left the inscription comprises: a bull's head on a short pole, followed by two back-to-back saddle bill storks with a bald ibis above and between them; a serpent, facing right, appears below the beak of the rightmost stork. The overall size of the inscription is 1.156 m X 0.644 m. The first stage of executing the inscription appears to have been a process of rough outlining by thin incised lines, some of which survive: 1) over the back of the right stork; 2) above the upper line of the wing of the right stork (across the neck of the bird); 3) above the back of the central ibis in the left group of signs. Following and ultimately incorporating in all but the noted places obliterating the initial incised cartoon of the inscription comes a process of creating wider, deeper lines. In some places – particularly visible in the back lines of the two storks, but present throughout – these apparent pecks are long, deeply incised lines. Many of the shorter blows also have more linear than circular outlines, suggesting that the entire “pecking” process here was the result of the use of a chisel (Fig. 6).

The signs in the el-Khawy inscription have almost identical parallels in early signs from Tomb U-j at Abydos, and support the exist-

tence of a common palaeography that was in place already at the beginning of the Naqada III Period (Fig. 7, 8, 9). The following section addresses each sign individually, including its significance and palaeographic parallels.



Fig. 5 • Photograph of the Dynasty 0 inscription at el-Khawy.



Fig. 6 • Facsimile copy of the Dynasty 0 inscription showing the extent of the pecked lines as well as the individual peck marks and incised lines.

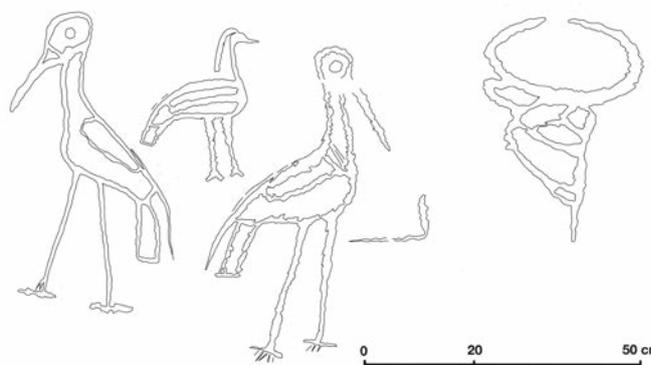


Fig. 7 • Facsimile copy of the Dynasty 0 inscription, showing the extent of the pecked lines of each sign and any accompanying incised lines (note: these outlines are used in the palaeographic chart, Fig. 8).

Fig. 8
 Palaeographic chart, comparing the signs of the Dynasty 0 el-Khawy inscription with epigraphic material from tomb U-j at Abydos (signs not to scale).

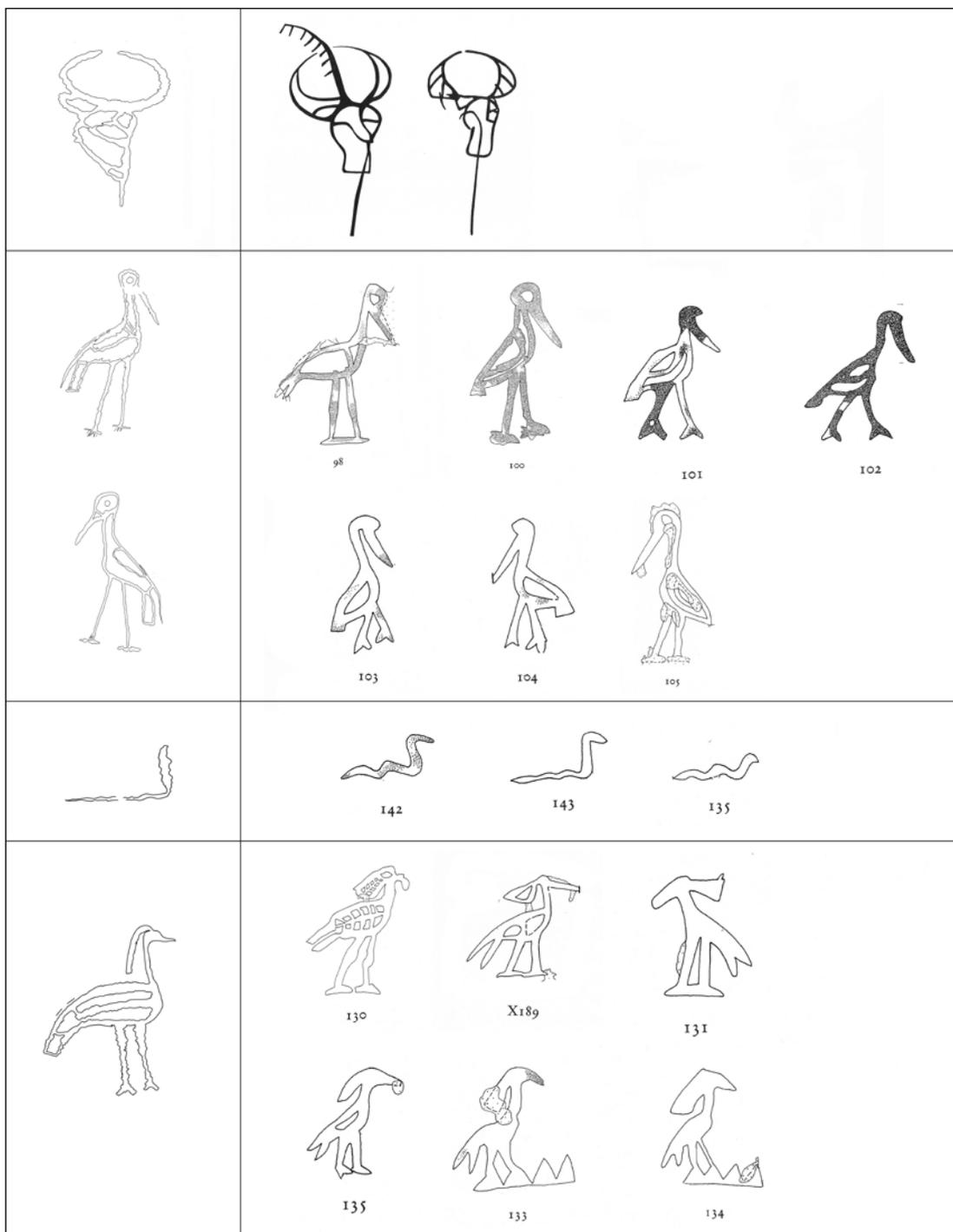
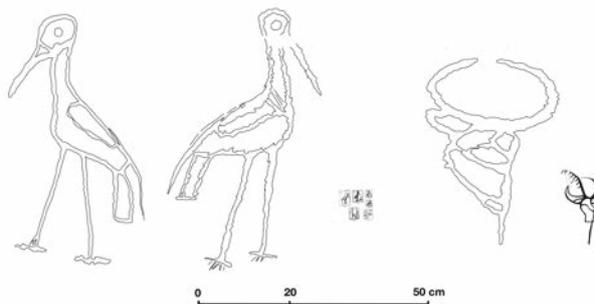


Fig. 9
 Comparison (to scale) of the bucranium on a pole and storks from the el-Khawy inscription with those signs in a dipinto and on labels from tomb U-j at Abydos.



Bucranium on pole (29.01 cm X 41.61 cm)

The closest – and very close – parallels are forms known from painted annotations on ceramic vessels from Tomb U-j at Abydos.¹⁷ Additional early signs of an animal's head on a pole in the southern portion of the Elkab area may represent variations of the bucranium on a pole,¹⁸ although these have the down-turning horns in the style of the sign of the head of a Nubian ibex atop a pole known from the Tomb U-j labels.¹⁹ The bucranium also appears as an element on an ostrakon of probably early Protodynastic date from Hierakonpolis.²⁰ The el-Khawy bucranium (Fig. 10) parallels the Tomb U-j examples in the rendering of the eye as an ovoid shape adjoining and partially extending out from the upper right of the head, and in representing the line that appears to indicate the facial veins of the animal.²¹ The appearance of the sign at el-Khawy provides further support for arguing against a use of the sign to write the name of the Seventh Upper Egyptian nome,²² and also makes extremely unlikely an interpretation of the sign as a reference to a commodity.²³ Dreyer has suggested that the sign – along with others following the sign of a tree or pole with branched elements – might designate a ruler in the name of a plantation,²⁴ and the sign indeed appears most probably to be a



Fig. 10
Detailed photograph of the bucranium on a pole in the Dynasty 0 tableau at el-Khawy.

symbolic representation of royal power that did not survive as one of the codified hieroglyphs of the developed writing system of the later script.²⁵

17. Dreyer 1998: 184. According to Regulski 2010: 17, regarding the painted ceramic annotations from U-j: “In addition, the developed system of writing that can be detected on the bone labels cannot be attested with certainty among the painted U-j annotations.”

18. Regulski 2002; see also S. Hendrickx 2002: 286.

19. Regulski 2010: 117 (f11; note that she rejects Morenz’ attempt to identify those U-j signs with cows’ heads; D. Huyge, however, notes [personal communication] that Scharff 1929: pl. 13, no. 61, is a cow’s head, and has a hole that would allow it to be affixed to a pole).

20. Hendrickx & Friedman 2003: 97-101.

21. Hendrickx *et al.* 2016: 505-533.

22. Championed by Kahl 2003a: 47-54; 2003b: 112-135; for an initial and convincing refutation, see Hendrickx & Friedman 2003): 97-101.

23. The suggestion that the sign on the vessels from U-j might indicate that the vessel contained “eingelegtes Rindfleisch” (Höveler-Müller 2008: 162, n. 18 [Höveler-Müller 2008: 162, also improbably suggests that the vessels bearing the scorpion sign contained “Skorpion-Substanzen”]) is impossible, as the sign in rock inscriptions and on the Hierakonpolis sherd (both known and published at the time of Höveler-Möller’s publication) rule out such a commercial interpretation (although the monumental inscription at el-Khawy as an advertisement for “Potted Beef by Appointment to the Royal Court” is oddly appealing).

24. An overview of opinions is Regulski 2010: 17; for a rock inscription of a tree/pole with branches with following serekh, see Friedman R., with J.C. Darnell, in Darnell *et al.* 2002: 20.

25. Hendrickx & Friedman 2003: 95-109; Regulski 2008: 989.

Saddle bill storks
(right stork: 33.96 cm X 57.83 cm;
left stork: 30.26 cm X 56.36 cm)

The large saddle bill storks²⁶ are virtually identical to other images of the bird, including examples at Vulture Rock at Elkab,²⁷ at Gebel Tjauti on the Theban Wadi Alamat track,²⁸ in the Wadi Magar west of Qamûla and Naqada,²⁹ and on labels from Tomb U-j at Abydos.³⁰ In both the Gebel Tjauti and Wadi Magar occurrences, the saddle bill stork appears as a pair of the bird signs (Fig. 11). The examples from Gebel Tjauti and the Wadi Magar show a doubling of the bird, attested in early orthographies of the name of the Fifth Upper Egyptian nome, and as a pair of deities who may represent – amongst other possibilities – Isis and Nephthys in one occurrence, and Horus and Seth in another.³¹ Phonetically the sign appears to represent *ba* in early hieroglyphic texts.³²

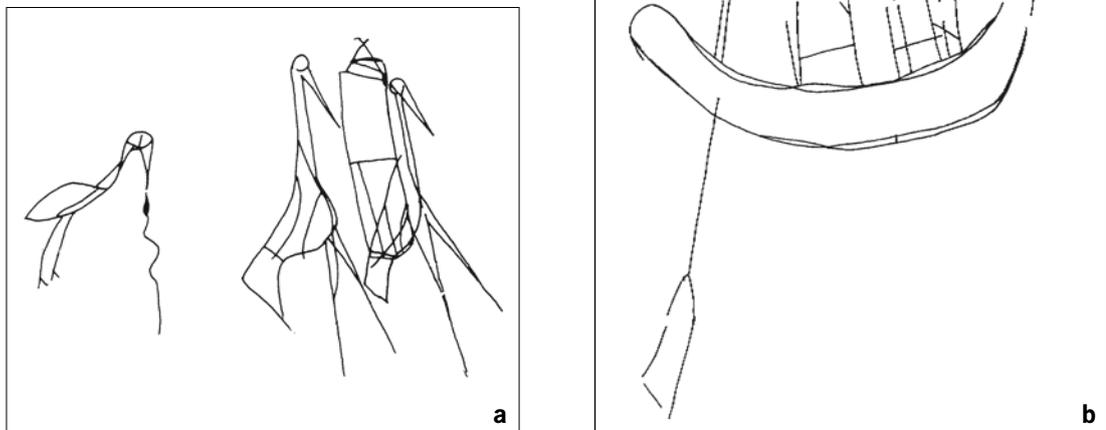
Serpent
(14.90 cm X 9.06 cm):

The serpent, depicted as though slithering with reared head to the right, is similar to the form of the sign on labels from Tomb U-j at Abydos. The sign could be a phonetic complement here – as it appears to function in the Tomb U-j labels – indicating *d(w)*, “mountain;” this would work well with the grouping of the storks to depict the hills of the horizon.³³

Bald ibis
(21.67 cm x 28.43 cm):

Between the two saddle bill storks is another, smaller bird facing to the right. The bird has a short and essentially hori-

Fig. 11
 Comparative
 Dynasty 0 storks
 from Theban
 rock art:
a. storks from the
 tableau of Horus
 Scorpion at Gebel
 Tjauti (Darnell *et al.*
 2002: pl. 11);
b. storks from
 a large tableau
 at Wadi Magar
 (Darnell 2016:
 pl. 148).



26. Regulski 2010: 124 & 446-447. Janák 2011 provides an overview of the development of the sign, including the observation that the late Predynastic images of the bird are more anatomically accurate than the later hieroglyph; a similar presentation appears in Janák 2014.

27. Huyge 1995: 135 (64.228), fig. 35, pls. 86A, 87A, & 8 (D. Huyge notes that these are not monumental in size, with 64.228 being 12 cm in height).

28. Darnell *et al.* 2002: 10-12.

29. Darnell 2013: 119 & 121 (and probably 21 & 103-104 as well).

30. Dreyer 1998: 184 (note the treatment of the feet as well).

31. See Fischer 1964: 45-46. For the Early Dynastic use of the sign – consistently with the phonetic value of *ba* – see Kahl 1994: 525-526.

32. Dreyer 1998: 141-142; Kahl 1994: 525-526.

33. For the sign in U-j see Dreyer 1998: 143 & 185; note the apparent orthography of “lightland” in the Tomb U-j corpus as serpent + mountain followed by stork (*ibid.*, p. 139).

zontal beak, with a long neck and horizontally oriented body, the tail feathers dropping down. The legs of the bird are shorter than the combined height of the head, neck, and body of the bird. The most distinctive feature of the bird is the single stroke that emerges in a curve from the top of the head and extends behind the neck for most of its length. The overall body shape of the bird and the element attached to the head identify this bird as hieroglyph Gardiner G25, which he identifies as a “crested ibis (*Ibis comata*),” although it should be more properly termed a “hermit ibis” or “northern bald ibis” (*Geronticus eremita*).³⁴ Although the ibis can have a longer, down-curving beak in later hieroglyphic palaeography, examples from tomb U-j and First Dynasty contexts often display a shorter beak.³⁵ Notably, the el-Khawwy ibis, like other examples of G25 from Early Dynastic objects, has a single stroke coming from the head, denoting long feathers (the single-stroke feature appears in all media during the First and Second Dynasties).³⁶ The later form of the sign, such as an example already from the reign of Khasekhemwy, connects

the feather behind the head to the neck with a horizontal stroke, creating the fan-shaped feathers of the standard pharaonic hieroglyph G25. The more horizontal body of the *akh*-bird in the el-Khawwy inscription is slightly closer to examples from the reign of Djer (First Dynasty) than to those of the Tomb U-j labels, although the more upright forms appear within the First Dynasty as well. The two storks here, back-to-back, recall zoomorphic and anthropomorphic representations of the horizon hills. The ibis hieroglyph (G 25) may well have its usual phonetic value and denotation of “luminosity,” specifically with reference to the eastern horizon in the Tomb U-j corpus,³⁷ in which the sign of the *akh*-bird alone may write *akhet*, “lightland,” a designation for the eastern horizon (Fig. 12).³⁸

One may contrast the stylized representation of the hermit ibis as G25 already present in the hieroglyphic repertoire in Dynasty 0 with other, more accurate depictions of the species in earlier Predynastic art. The hermit ibis appears in several Naqada II/early Naqada III objects, including a schist palette³⁹ and a number of carved ivory objects

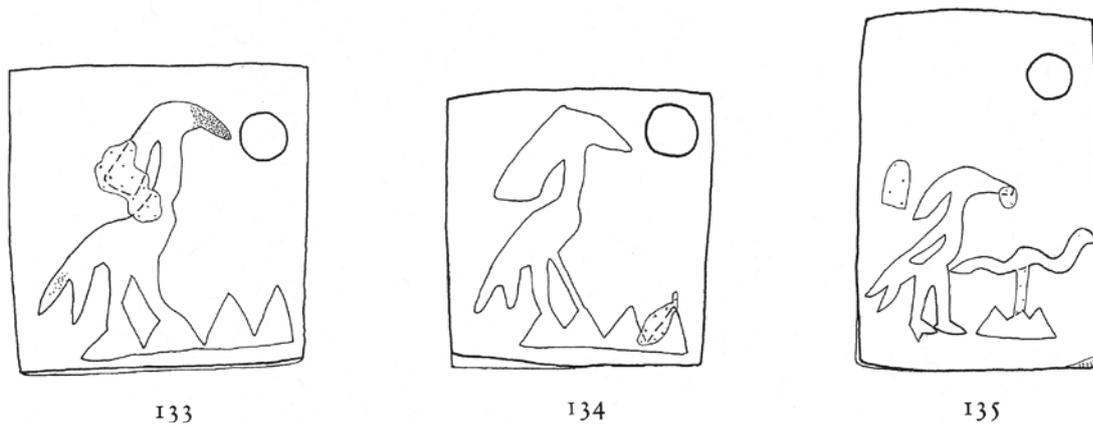


Fig. 12
Labels from tomb U-j at Abydos, using the bald ibis (G25) possibly to write *akhet*, “horizon” (Dreyer 1998: 130, Abb. 80).

34. Houlihan 1986: 31–32; Janák 2010, summarized in Janák 2013.

35. Regulski 2010: 444–445.

36. Compare also the appearance of the probable *akh*-bird scratched onto an ostrakon from Hierakonpolis – Pyke & Colman 2006: 6; Park 2016: 103.

37. Dreyer 1998: 139; Regulski 2010: 123. For value of the sign in Early Dynastic texts see Kahl 1994: 523–524.

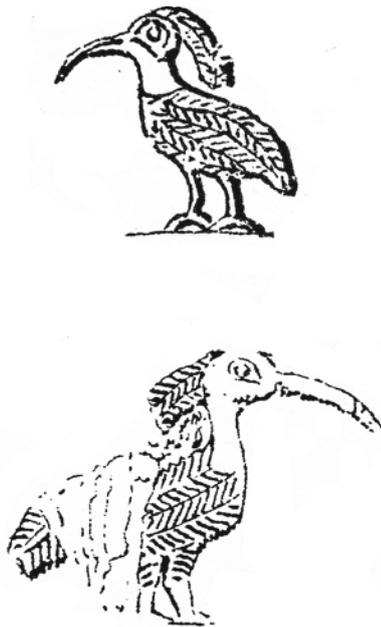
38. Kahl et al. 2002: 5. For the Tomb U-j association of *akh* with the eastern horizon, note that the concept of *akh* in the Pyramid Texts is associated with deities of regeneration and creation, and particularly with liminal stages, passage into another form of being, and at the point of rebirth (Englund 1978: 23–64).

39. Asselberghs 1961: 321, figs. 84–85 & pl. LI.

from the Main Deposit at Hierakonpolis (Fig. 13).⁴⁰ The differentiation between a naturalistic, pre-hieroglyphic rendering and a stylized usage for what will become a phonetic hieroglyphic sign indicates that the el-Khawy inscription is part of an early palaeography spread throughout Upper Egypt that differs from hermit ibis *qua* bird.⁴¹

Fig. 13

Bald ibises on decorated ivories from the Main Deposit at Hierakonpolis (Quibell 1989: pl. XVI).



Interpretation of the el-Khawy Protodynastic Panel

As with all early hieroglyphic inscriptions, the reading of the signs and interpretation of the text remain speculative due to the brevity of the composition. Nevertheless, the arrangement of the signs – in the light of other Predynastic and Protodynastic material – is revealing. The addorsed saddle bill storks (the *ba*-hieroglyph in later writing) with the bald ibis (the *akh*-hieroglyph in later writing) rather than being simply animal images, appear to express a specific concept of a balanced and light suffused cosmos. The B-A-B arrangement of symbols – here the stork-bald ibis-stork group – is common in Egyptian representations of the cosmos, particularly icons of the solar cycle,⁴² and the bald ibis (the hieroglyphic *akh*-bird) is indeed associated with the concept of luminosity. The B-A-B arrangement is apparent in Predynastic through Early Dynastic iconography, prominently displayed in the paired serpopards to either side of the central grinding area on the Hierakonpolis Palette and the later Narmer Palette. The same arrangement occurs in the group of giraffes flanking a central palm on several decorated palettes (and on Naqada III decorated pottery⁴³), a triad almost certainly a depiction of order over chaos within a dualistic cosmos,⁴⁴ and perhaps ultimately solar in application.⁴⁵ The

40. Hermit ibises appear on two fragmentary cylindrical ivory objects: Bussmann 2010: vol. I, 244; vol. II, 95, Abb. 5.67 (H2125) & 96, Abb. 5.68 (H2126; note that for Abb. 5.68 a drawing is published in Quibell 1989: pl. XII.1). Several hermit ibises appear on a curved object that might be part of a “magical knife.” Cairo CG 14706 (= JE 32170); Bussmann 2010: vol. I, 245; vol. II, 96, Abb. 5.76. Hermit ibises appear in a row of other fowl below a register of niched buildings crowned with bucrania on a carved tusk: Bussmann 2010: vol. I, 246; vol. II, 98, Abb. 5.82. Several hermit ibises in a row also appear in a register with other birds on a carved ivory plaque: Bussmann, vol. I, 248; vol. II, 102, Abb. 5.105.

41. Note the Protodynastic stone vessel Munich ÄS 7162, with a row of “hieroglyphic” birds, associated with two bucrania above, triple desert hills and a boat (possibly a throw stick) below – see Schoske, in Donadoni Roveri & Tiradritti 1998: 214-215. A similar arrangement of images, with a row of birds occupying the middle register, a row of desert game in the bottom register, and an upper register of niched façades with bucrania above the “doorways” thereof, appears on the decorated tusk from Hierakonpolis H2156 – Bussmann 2010: vol. I, 246; vol. II, 98, Abb. 5.82.

42. See Assmann 1995: 43 *et passim*. In later pharaonic versions of the horizontal, “positional” B-A-B arrangement, a vertical, “temporal” B-A-B aspect may also appear – see Hornung 1979; 1981.

43. See Williams 1988: fig. 2 (ref. courtesy D. Huyge).

44. Hendrickx & Eyckerman 2012: 47-51; Hendrickx *et al.* 2016: 511.

45. Huyge 2002: 199-200. These images presage the long-lived Egyptian tradition of paired concepts in a type of “binary thinking,” often involving opposites (compare *inter alia* Englund 1989). For the possibility of a solar-dominated cosmos equated with a solar kingship existing already during the Early Dynastic Period, see Kahl 2007.

B-A-B arrangement is also the pattern of the hieroglyph of the solar disk rising between the twin hills – Gardiner sign N27 – which does not appear in the early hieroglyphic sign list.

Paired avian images are present on Predynastic palettes, at times having a bovid association,⁴⁶ potentially providing iconographic precursors to the combination of bucranium and paired storks in the el-Khawwy inscription, although this is a most tenuous association. In conjunction with a pair of saddle bill storks, the bucranium occurs in the Gebel Tjauti tableau referenced above. The bucranium on a staff appears in some way related to royal authority, consistent with the imagery of the bull in Predynastic, Protodynastic, and Dynastic imagery.⁴⁷ Regulski has suggested that some of the early signs attested from Tomb U-j – particularly those written on vessels as opposed to those appearing on the ivory labels – belong to evidence for regional, “Preformal” systems of visual communication, utilizing signs that almost immediately fell out of use in the increasingly standardized hieroglyphic sign list.⁴⁸ The el-Khawwy inscription, with its incorporation of the bucranium-on-pole symbol, reveals that the apparent Abydene mixture of Preformal and Formal systems could coexist within the formative stages of Egyptian writing in the region of Elkab/Hierakonpolis. The relative wealth of early hieroglyphic textual material from tomb U-j at Abydos certainly reveals the integral association of literacy and the early royal administration; the occurrence of a palaeographically coeval hieroglyphic inscription at el-Khawwy may be further indication of the important connections between Abydos and the Elkab/Hierakonpolis region at the

dawn of Dynasty 0.⁴⁹ The el-Khawwy inscription demonstrates a relatively broad geographic reach of early hieroglyphic scribal activity and may even suggest that the origins of the hieroglyphic writing system also include the Elkab-Hierakonpolis region.

The closest parallel to the el-Khawwy early hieroglyphic inscription, in terms of arrangement and meaning, is the decoration on the comb of Djet (JdE 47176; Fig. 14).⁵⁰ There the wings of the sky⁵¹ carry the solar bark between the two *was*-scepters, with the name of the king below – the power of sun in heaven, and that of the king on earth, are equated, both filling and ordering the cos-



Fig. 14
Ivory comb from
the reign of Djet
(JdE 47176).

46. Hendrickx 2002: 289-291.

47. Hendrickx 2002; Hendrickx et al. 2014; 2014/2015: 236-237 *et passim*; see also Darnell 2011: 1177-1178 *et passim*.

48. Regulski 2008: 983-1007.

49. As proposed in relation to the Scorpion Tableau at Gebel Tjauti in Darnell et al. 2002: 10-19.

50. See *inter alia* Vandier 1952: 848-850; Wilkinson 1999: 74 & 184-185; Blumenthal 2003: 16.

51. The imagery of the Djet comb finds textual expression in one of the “Songs of the Drinking Place,” accompanying Tutankhamun’s depictions of the Opet Festival in the Colonnade Hall of Luxor Temple – see The Epigraphic Survey 1994: pls. 18, 26 & 97, with p. 13, n. f (note that a portion of one of the songs appears in the tomb of Mereruka – see also Darnell 2016: 39 & n. 59).

mos.⁵² The el-Khawy inscription appears to express the concept of royal authority over the ordered cosmos by juxtaposing a Preformal sign of royal power – the bucranium on a staff – with a phonetic and iconographically arranged group of Formal early hieroglyphs describing the light-filled cosmos.

The intended visibility of the inscription, due to the size of the signs and their high placement on the rock face, reveals the use of an early hieroglyphic inscription as a sort of public signpost, comprehensible in full to perhaps but a few, but apparently of apotropaic import of some significance for travelers in the area. The inscription reveals a mingling of epigraphic and iconographic features – a phonetic writing of luminosity occupies the physical space between addorsed writings of divine power that in their grouping become the supports and boundary markers of a cosmic icon. These uses of signs as phonemes, words, and concepts, with groupings that mirror the arrangements of elements of iconography, are characteristics of all later Egyptian hieroglyphic writing. Although much early Egyptian writing is of an administrative nature, the el-Khawy inscription reveals a use of the script in a large scale public monumental form already at the dawn of the script. The el-Khawy early hieroglyphic inscription supports Regulski's summary of the purpose of early hieroglyphic inscriptions: "The social setting in which writing emerged was dominated by the ideology of sacred power and the performance of royal ritual, coinciding with increased economic, political, and military supremacy."⁵³

Rock art in the Eastern and Western Deserts of Egypt demonstrates that ancient artists often interacted with earlier images – clustering similar images or images with related meanings on the same rock surface.⁵⁴ Rock

art concentrations in the Theban Western Desert reveal that particular types of images tended to focus on certain areas of a site – even at a site so extensive (the main concentration stretching for roughly a kilometer) as "Dominion Behind Thebes;" this principle of "iconographic attraction" provides a means of understanding communication over time through the medium of rock art, a diachronic perspective generally missing from the synchronic evidence of artistic production in the Nile Valley. As the Predynastic Period progressed, rock art tableaux present examples of preconceived iconographic attraction – repetitive lines of animals, for example, whose specific juxtapositions can begin to reveal a form of iconographic syntax. By the last phase of the Predynastic Period, rock art and other objects from the Nile Valley could use the earlier zoomorphic icons, grouped according to the principles of the nascent iconographic syntax, to express concepts, such as the saddlebill stork with a serpent beneath its beak meaning "victory," or perhaps more specifically "control" (as the stork dominates but does not peck or consume the serpent), that control or victory specified by a following sign, perhaps the giraffe designating of the solar arbiter of cosmic order (as in the Davis Comb at the Metropolitan Museum of Art [MMA 30.8.224]), the victorious ruler as human manifestation of cosmic order (the Scorpion Tableau at Gebel Tjauti),⁵⁵ or some other image providing an as yet obscure specification (as in the Arqub Baghla tableau).⁵⁶ These symbols are not phonetic writing, but appear to provide the intellectual background for moving from depictions of the natural world to hieroglyphs that wrote the sounds of the ancient Egyptian language.

52. The interpretation of the imagery on the comb of Djet in Quirke 1992: 21-22, reads as though it might be a reasonable interpretation of the el-Khawy early hieroglyphic inscription: "The depiction presents concisely and clearly the central tenet binding together ancient Egyptian civilization, the notion that the king fulfills a role on earth under the protective wings of the celestial falcon in heaven." See already Schäfer 1928: 113-114; Gardiner 1944: 47-52.

53. Regulski 2016: 6 (quotation).

54. Darnell 2009.

55. For the group of stork and serpent see Friedman R., with J.C. Darnell, in Darnell et al. 2002: 15-16.

56. Darnell 2013: 102 & 121.

The early hieroglyphic inscription at el-Khawy provides another example of this important transitional phase. While neither the saddle bill storks possibly serving as the twin hills of the horizon nor the bucranium symbolizing royal power have recognizably phonetic functions within the inscription, the ibis placed between the storks serves as both an icon of the solar luminosity, and phonetically writes that concept. In the el-Khawy inscription the earlier zoomorphic cosmography – the bovine image of the ruler and the animal representations of the solar dominated cosmos – manifest themselves as hybrid groups that incorporate both iconography and phonetic annotations. The el-Khawy signs are among the earliest forms of writing in Egypt, belonging to the tradition and time of the Tomb U-j hieroglyphs. With the largest of the el-Khawy early hieroglyphic signs over half a meter in height, they are the largest yet discovered from Dynasty 0 – the first “monumental” proto-hieroglyphs.

The maintenance of a remarkably consistent palaeography for early hieroglyphic signs at a wide range of sizes – an almost infinite scalability of the early script (compare fig. 9 – is an important feature of the el-Khawy Dynasty 0 inscription. The site is but a short distance north of the previously mentioned Sheikh Uthman site, where the name of the Horus Qa-a appears. The serekh of the same ruler is present at the Borg el-Hamam site to the south, and together the two inscriptions, each incorporating a serekh of Qa-a and an image of the vulturine form of the goddess Nekhbet, appear to present a physical marking of the northern and southern edges of the great Wadi Mahamid and Wadi Hilal systems. If the name of Qa-a is a marker of royal interest in that region, mirroring the interest Qa-a appears to have shown to other desert roads, then the el-Khawy inscription may reveal a similar official interest, and a similar official desire to express that interest through inscriptional announcements.

Epigraphic Recording Technique

Traditionally, rock art in Egypt has been recorded photographically, with facsimile copies requiring the use of a thin, clear plastic on which permanent markers could be used to trace each line or peck-mark within a tableau. The creation of a final, publication-ready copy necessitated scanning of the plastic, with additional collations of an inked copy or a manipulated version of the scan. Such a method meant that multiple seasons of work and laborious on-site copying were required to create a final facsimile copy. New photographic techniques, such as photogrammetry and RTI now offer more accurate recording of the rock surface and inscriptions,⁵⁷ and the Elkab Desert Survey Project has pioneered a fully digital rock art recording technique.⁵⁸ By utilizing Structure from Motion photogrammetry (with Agisoft Photoscan software) in combination with tracing software on a tablet computer, we have further refined our ability to create precise vector drawings of each panel, with individual layers capturing the complexities of the palimpsest; this process obviates the need for any use of plastic-based copies. Photographs taken from multiple angles with a full-frame digital camera are processed in Agisoft Photoscan software to create a three-dimensional model, from which ortho-images can be extracted; these ortho-images are the most accurate way to capture the complex surface of the rock art panels. The ortho-images are then imported into a tablet computer and a vector drawing is created within an application. The tablet provides a drawing surface that is nearly identical to a paper and pencil, enabling the epigrapher to place lines precisely atop the ortho-image, and the great advantage of a vector drawing is that corrections can be made throughout the process – from the adjusting of individual lines to the alteration

57. Hameeuw *et al.* 2016.

58. A more detailed presentation of this work flow will appear in two articles by A. Urcia, J.C. Darnell, and C.M. Darnell, in preparation.

of entire layers. The portability of the tablet enables the drawing process to take place on site as well, allowing the epigrapher to consult the original inscription without any intervening material, as opposed to work-

ing only from photographs or attempting to discern lines beneath plastic. Using this technique at the el-Khawwy site, we were able to produce publication-ready copies within two weeks of the site's discovery.

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