

Online supplementary material

S1 Protodynastic funerary complexes

The sequence of the first kings of Egypt in Abydos follows the southern extension of the Naqada IID and IIIA chamber tombs excavated from the mid-1970s by the Deutsches Archäologisches Institut of Cairo (Dreyer 2011). These excavations formed a clearly defined area where the establishment of royal funerary complexes for the First Dynasty and the later Second Dynasty is evident (Amélineau 1901, 1902, 1904; Petrie 1900, 1901; Bestock 2011). The Early Dynastic remains lie in a wide depression measuring 800m long by 450m wide, corresponding to the bed of an ancient wadi linked by a narrow passage to the Kom-es-Sultan locality, which was partly used as an elite cemetery during the Old Kingdom.

The oldest certified structures are the brick-lined chambers B1 and B2, and potentially the well B0. These have all been assigned to a 'king' Iry-Hor ('Dynasty 0') based on inscriptions found on seals and ceramic material. Nearby chambers B7 and B9 most likely correspond to the funerary monument of Ka, the direct predecessor of Narmer who is associated with structures B17 and B18.

The first substantial funerary complex appeared during the reign of Aha, first or second king of the First Dynasty (depending on whether one places Narmer at the end of 'Dynasty 0' or at the beginning of the Thinite classification). Its extension and organisation reveal a crucial reorientation of the social, political and cultural climate. Consisting of three main funerary chambers (B10, B15 and B19) associated with wells (B13 and B14) and a series of 34 subsidiary tombs organised '*en comète*' (in a comet's tail), these structures spread out over a hundred metres, occupying a space rarely afforded to a grave (Midant-Reynes 2003). To the east of this tomb, a rectangular structure made of four compartments, identified by Petrie in 1900, may have belonged to one of Aha's ancestors, possibly 'King Scorpion'. Located immediately next to it, Chamber B40 has not revealed the identity of its occupant who most likely preceded the First Dynasty.

The tombs of Aha's successors, stretching west to Khasekhemwy's large tomb, comprise rooms of varying sizes and employ sizable areas in order to accommodate numerous 'satellite' graves. The tomb of Djer contains approximately 590 of these subsidiary graves, organised in a centripetal fashion around the royal chamber. A

similar plan can be seen in the tomb of Djet, the only tomb with remains of a superstructure still standing (mud-brick walls supporting a large sand tumulus). The tomb of Den marks a distinct progression within this movement; its funerary chamber sees the addition of an imposing staircase and the progressive aggregation of subsidiary tombs to the main complex (Midant-Reynes 2003). The connection of accompanying graves to the royal tomb is a pattern already visible in the previous tomb of Merneith and which can be more clearly seen in later funerary monuments of Anedjib, Semerkhet and Qa'a, and abolishes the separation that once was standard (Dreyer *et al.* 2000, 2003).

The tomb of Peribsen doubtless occupies a unique place within the development of funerary space; lacking any subsidiary tombs, it is organised around a main chamber surrounded by eight lateral alcoves. This is another significant change at the beginning of the Second Dynasty, marking a break with customs of the previous period. The distinction is further emphasised at the end of the Second Dynasty in the layout of King Khasekhemwy's funerary complex.

References

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S2 The bibliographical records.

Extracts from various publications of the tomb of Seth and Horus/Khasekhemwy (1901–1902). From Petrie, 1901: 12 and 1902: pl. XV; Amélineau, 1902: 159–160 and 271–272.

S3 List of studied objects

Louvre Museum: E25264; E25265.

Musée d’Archéologie nationale, Saint-Germain-en-Laye: 49880a–g (7 items); 71120a–c (3 items); 75734 (8 items).

N.B. this inventory of the Saint-Germain-en-Laye collection is a conservative estimate of pieces; dozens more that are typologically very close to those identified for the tomb of King Khasekhemwy are preserved at Saint-Germain-en-Laye, but we cannot prove their provenance with certainty.

Châteaudun Museum: 83-SDA-297; 83-SDA-298; 83-SDA-299; 83-SDA-300; 83-SDA-301; 83-SDA-302; 83-SDA-303; 83-SDA-304-1; 83-SDA-304-2; 83-SDA-305-1; 83-SDA-305-2; 83-SDA-306-1; 83-SDA-306-2; 83-SDA-307-1; 83-SDA-307-2; 83-SDA-308-1; 83-SDA-308-2; 83-SDA-308-3 ; 83-SDA-309-1; 83-SDA-309-2; 83-SDA-309-3; 83-SDA-310-1; 83-SDA-310-2; 83-SDA-311-1; 83-SDA-311-2; 83-SDA-312; 83-SDA-313; 83-SDA-314; 83-SDA-315; 83-SDA-317; 83-SDA-318; 83-SDA-319; 83-SDA-320; 2006-05-5 (24 items); 2006-05-6 ; 2006-05-7; 2006-05-8; 2006-05-9; 2006-05-10; 2006-05-11; 2006-05-12; 2006-05-13; 2006-05-14 (2 items); 2006-05-28; M0017; M0018.

Ashmolean Museum: 1896–1908.E576; 1896–1908.E577; 1896–1908.E578; 1896–1908.E579; 1896–1908.E580; 1896–1908.E581; 1896–1908.E582; 1896–1908.E583; 1896–1908.E584; 1896–1908.E585; 1896–1908.E586; 1896–1908.E587; 1896–1908.E588; 1896–1908.E589; 1896–1908.E590.

Cairo Museum: JE31850; JE31851; JE31852; JE31853 (6 items; Amélineau); JE34980 (Petrie).

British Museum Database: 1901,1028-37; 1901,1028-38; 1901,1028-39; 1901,1028-40; 1901,1028-41; 1901,1028-42.

Available at: https://www.britishmuseum.org/research/collection_online/search.aspx (accessed 23 April 2015).

Oriental Institute Database: E6267; E6268; E6269; E6270; E6271; E6272; E6273; E6274. Available at: <http://oi-idb.uchicago.edu> (accessed 15 April 2015).

University of Pennsylvania Database: E6841, E9570; E9571; E9572; E9573; E9574; E9575; E9576. Available at: <http://www.penn.museum/collections/> (accessed 15 April 2015).

Four objects from the Petrie excavations (Inv. Nb.: ÄM 15554) given to the Ägyptisches Museum of Berlin in 1907 are otherwise missing (a fragment of a bifacial knife, two 'razor blades' and a blade blank). Some pointed blades and fragments of bifacial knives from the Amélineau collection of this Museum could also emanate from the tomb of King Khasekhemwy.

Finally, several bifacial knives or fragments from the Lortet and Guimet collections of the Musée des Confluences in Lyon (ex-Guimet Museum, France, Inv. Nb. T628, T643 to T655) appear to come from the dispersion of the archaeological material from the Amélineau excavations in the royal necropolis of Umm el-Qaab. Most are typologically close to artefacts dating to the end of the Second Dynasty.