

Bones and Art Narrate the History of Dwarfs in Ancient Egypt

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ABSTRACT

The existence of dwarfs is amply documented throughout ancient Egypt, in particular during Predynastic/early Dynastic Times, before the pyramids were built. Evidence includes complete and partial skeletons, artistic representations, and written texts. There were two dwarf gods, Bes and Ptah, who were widely worshiped. The artistic representations are abundant in the form of statues, amulets, as well as drawings on walls of temples and tombs revealing wide integration into society.

Ancient Egyptians believed in the principles of Maat, the divine personification of principles and law that are considered the world's oldest sources of moral instructions. Wisdom teachings as summarized by Amenemope, a wise man, advised about charity, social justice, and ministering to the poor and disabled:

Do not turn away a stranger from your oil jar

That it may be made double for your family.

God loves him who cares for the poor,

More than him who respects the wealthy.

INTRODUCTION

Around 10,000 BCE, North Africa and the Sahara were fertile lands where many communities lived. However, a significant drought resulted in the Sahara becoming less habitable. As a result, populations from the west moved to the East and settled along the Nile River in small settlements. Eventually they moved into well planned cities, thus setting the stage for major development of the ancient Egyptian civilization. The transition from hunter gatherers to an organized society was accompanied by changes in burial customs. Simple burial grounds became gradually replaced by organized and complex cemeteries [1]. The dead were buried with provisions for later life including food, jewellery, cosmetic objects, and pots. As a result of these new customs, biological and artistic evidence was preserved including those of dwarfs.

Predynastic Times in ancient Egypt is the name archaeologists have given to the three millennia before 3050 BCE. Many artifacts from that period were discovered, offering an insight into the development of a culture that influenced most aspects of ancient Egyptian society, including the high esteem of dwarfs. Pharaonic or Dynastic Egypt began in 3050 BCE following the unification of the upper and lower parts of the land under King Narmer (Table 1). The writing system emerged around 3300 BCE [2] and the famous Giza pyramids were built from roughly 2550 to 2490 BCE.

The existence of dwarfs in ancient Egypt has been recorded since early Predynastic Times. However, the most interesting evidence dates to the First Dynasty since dwarfs were honored by burials in subsidiary rooms in the royal cemeteries, indicating their

elite status. The royal tombs of the First Dynasty rulers are located in Abydos [3]. The city is an important site in ancient Egypt, located 370 miles south of Cairo. In this article I discuss skeletal alterations that occur with disproportionate short stature and analyze the function of dwarfs in ancient Egyptian society. The evidence of the existence of dwarfs in ancient Egypt includes biological and artistic sources.

Table 1: Chronology of Ancient Egypt Including Predynastic Times.

Late Paleolithic Period	6500-4400 BCE
Badarian Period	6500-4400 BCE
Naqada I	6500-4400 BCE
Naqada II	3800-3300 BCE
Naqada IIIAB	3300-3050 BCE
Unification under king Narmer	3050-3100? BCE
Dynasty I	3000-2890 BCE
Dynasty II	2890-2686 BCE
Old Kingdom	2686-2160 BCE
First Intermediate Period	2160-2055 BCE
Middle Kingdom	2055-1650 BCE
Second Intermediate Period	1650-1550 BCE
New Kingdom	1550-1069 BCE
Third Intermediate Period	1069-656 BCE
Late Period	664-332 BCE
Ptolemaic Period	332-30 BCE
Roman Period	30-395 AD

RESULTS

Biological evidence

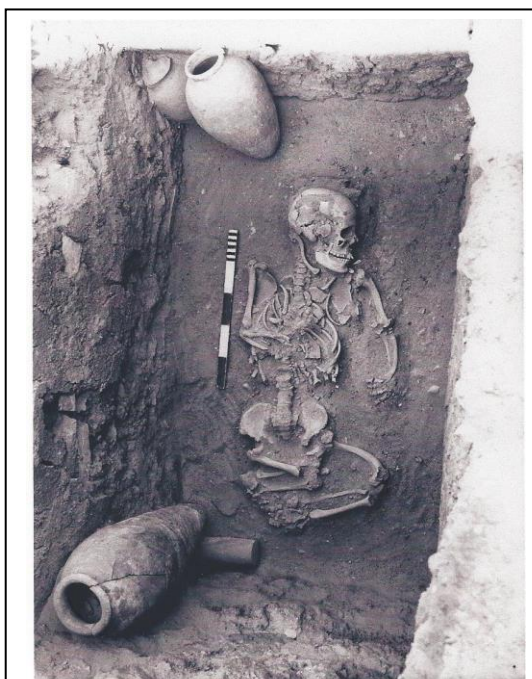


Figure 1: The dwarf in king Wadj tombs. Skeleton of a male adult dwarf displaying disproportionately short limbs. Unplundered burial with traces of wooden coffin. Dynasty I.

The biological presence of dwarfs is abundant in ancient Egypt in the form of partial and complete skeletons dating from Predynastic and Dynastic Times. The oldest dwarf skeleton that dates to the Badarian period (4400-4000 BCE), is most likely an example of multiple epiphyseal dysplasia or other short limbed dwarfism [4]. The skeletons of two dwarfs that were excavated in Hierakonpolis, a city in ancient Egypt, dating to 3100 BCE were initially identified as achondroplastic dwarfs [5-7]. However, the small diameter of their long bones questioned the initial diagnosis. The skeleton of an adult male in the tomb complex of king Wadj had changes of the long bones initially thought to be caused by rickets. For many Egyptologists, the changes were considered to be due to achondroplasia (Figure 1) [8]. The dwarf humerus discovered by Petrie in his excavation of the Royal Tombs of the Earliest Dynasties in Abydos [9] is located in Penn Museum (University of Pennsylvania Museum of Archeology and Anthropology). Penn Museum received the humerus (Figure 2) as well as many other Predynastic artifacts through its collaboration with Petrie [10]. He was a very prolific British Egyptologist who excavated ancient Egyptian sites and shared his finds with collaborating museums

[<http://www.ucl.ac.uk/museums-static/digitalegypt/archaeology/abydosdistribution.html>].

A skull that was originally in the Temple of Thotmes VI in Thebes (ancient Egyptian city) and dating to the Eighteenth Dynasty (1550-1292 BCE) was initially thought to be affected by cretinism. Additional study of the same skull concluded that it belonged to a female about 25 years old who had achondroplasia [11]. The skeleton from the Dakhleh Oasis represents a female with proportionate short stature probably due to pituitary dwarfism or hypopituitarism. The skeleton is complete however, the skull is missing. It dates to 1075-715 BCE [12]. All other skeletons have achondroplasia due to the characteristic features and because the condition is the most common type of short-limbed dwarfism (Table 2) [13,14]. The list in table 2 is an underestimate since it only includes skeletal remains that have been examined, photographed, and published in the English language. Brief reports of dwarf skeletons that were found by early excavators and have not been photographed, were not included [15].

The diagnosis of ancient skeletal remains continues to rely on clinical examination and radiology when available. Molecular

Table 2: Summary of Dwarf Skeletal Remains from Ancient Egypt.

	Period of Time	Type	Gender	Current Location	X Rays	Author(s)
1-The Badarian Skeleton. Partial skeleton	4500 BCE	MED [†] ?	U	Unknown	yes	Jones EWAH. 1932
2- Hierakonpolis Dwarf. Complete skeleton	3100 BCE	achondroplasia?	F	Egyptian Antiquities	yes	Pieri A. 2011
3- Hierakonpolis Dwarf. Complete skeleton	3100 BCE	achondroplasia?	M	Egyptian Antiquities	yes	Pieri & Antoine. 2012
4-Skeletal remain from the tomb of King Djer (Zer). Humerus only	3000 - 2800 BCE	achondroplasia	U	Penn Univ. Museum E9458	no	Petrie WMF 1901
5-The Dwarf in King Wadj tombs. Complete skeleton	3100-2800 BCE	achondroplasia	U	Cairo University	no	Emery WB. 1954
6-The Dwarf in king Smerkhet tombs. Partial skeleton	3050-2890 BCE	achondroplasia	U	NHM [‡] London Specimen AF.11.41427	no	Putschar & Ortner. 1985
7-The Dwarf in king Smerkhet tombs. Partial skeleton	3050-2890 BCE	achondroplasia	U	NHM [‡] London Specimen AF.11.41427	no	Putschar & Ortner. 1985
8-The Dwarf Pereniank. Complete skeleton	2700-2184 BCE	achondroplasia	M	Egyptian Antiquities Specimen 1700	yes	Kozma et al. 2011
9-The female Dwarf worker with fetus insitu. Complete skeleton/partial fetal remains	2700-2184 BCE	achondroplasia	F	Egyptian Antiquities Specimen 1913 B	yes	Kozma et al. 2011
10-The skull in the Temple of Thotmes VI in Thebes. Skull only	1580-1350 BCE	achondroplasia	F	Royal College of Surgeons London [‡] ?	no	Keith A. 1913
11- The skeleton from the Dakkeh Oasis. Complete skeleton/absent skull	1075-715 BCE	hypopituitarism?	F	Egyptian Antiquities	no	Molto & Kirkpatrick. 2018

Key: M: male, F: female, U: undetermined sex, *multiple epiphyseal dysplasia, [‡] Natural History Museum, [‡] current location could not be verified.

diagnosis of achondroplasia in very old mummies remains problematic. A final conclusion may have to await further progress in the field of molecular testing of ancient bones. Published data indicate, that PCR-induced sequence alterations, hamper the typing of prehistoric bone samples for diagnosing achondroplasia mutations. The specimen was taken from a First Dynasty Egyptian achondroplastic skeleton [16]. Recently, the G1138A mutation of the *FGFR3* gene was detected in tooth material from a 180-year-old museological achondroplastic skeleton by using Sanger sequencing of a small region of the *FGFR3* gene [17].

Achondroplasia (OMIM 100800) is a genetic disorder that results in disproportionate short stature with particularly proximal or rhizomelic short limbs. The facial features are characteristic for prominent forehead, depressed mid face, and a protruding mandible. Radiologically, almost all the bones of the skeleton are affected including progressive decrease in interpedicular distance in lumbar spine with metaphyseal flaring and rhizomelic shortening of the long limbs. The condition affects both sexes and all races occurring with a frequency of about 1 in 15,000. It results from a mutation in the fibroblast growth factor receptor 3 (*FGFR3*) gene. The *FGFR3*

gene provides instructions for making a protein that is involved in the development and maintenance of bones. Mutations of *FGFR3* gene cause decreased endochondral ossification, reduced cartilage matrix production, and inhibited proliferation of chondrocytes in growth plate cartilage. Such pathological changes lead to the short stature and characteristic skeletal findings in affected individuals. The inheritance is autosomal dominant. In the majority of cases, the condition results from a de novo mutation in a parent of average height. The mean height of males is 130 cm and for females 122-125 cm. Intelligence and life span are usually normal, though both children and adults are at increased risk of pulmonary, orthopedic, and neurological disorders [18].

Artistic evidence

The artistic evidence of dwarfs from ancient Egypt is quite plentiful. It includes tomb and vase paintings, large statues as well as minor arts in the forms of small figures, amulets, and drawings [19]. In Predynastic Times, dwarfs were represented as small statuettes found in cemeteries since they were valued enough to accompany the dead to the afterlife. The Walters Art Museum (Baltimore/ USA) has several figurines of dwarfs from Predynastic Times including an old man holding a child



Figure 2: Object no. E9458. Dwarf humerus. Anterior and posterior views. Note the wide anatomical neck, prominent deltoid tuberosity, wide and flared epiphyses, and the humerus being short and robust. The bone is broken into about 5 pieces and will be requiring conservations. Dynasty I. Penn Museum. Philadelphia/USA. Image courtesy of the Penn Museum.



Figure 3: Object no. E9499. Round-topped funerary stela with the name of the owner, Ded, inscribed in raised relief. Below the name there is a determinative (?) or a figure of a dwarf. Located in a subsidiary room in the tombs of King Djer. Limestone material. Height 66 cm width 30 cm. Egyptian Early Dynasty. Penn Museum. Philadelphia/USA. Image courtesy of the Penn Museum.

[20]. A limestone carving in Cairo Museum (CG14518), also from Predynastic Times, depicts dwarf warriors conquering dangerous animals indicating that ancient Egyptians believed in the supernatural power of dwarfs [21] Dwarfs of the First Dynasty buried in the royal tombs of Abydos were further honored and memorialized by limestone stelae; two of them are located in Penn Museum (Figure 3,4) [22]. As figures 3 and 4 indicate, the dwarfs are depicted standing, with short legs and arms, with feet wide apart perhaps to emphasize the disproportionate body habitus. Other artifacts from the tombs of the First Egyptian Dynasty rulers are located in major museums. They include a quartzite bowl with incised figure of a dwarf as well as a female dwarf figurine in the Fine Arts Museum of Boston/USA (Figure 5,6). The largest deposit of dwarf figurines however, was discovered in Tell El Farkha in 2006 and dates to the Early Dynastic Period. The site is

located in eastern Nile Delta about 120 km northeast of Cairo. A total of 13 figurines, depicting male and female dwarfs, were found with the majority being located in Cairo Museum/Egypt [23].

DISCUSSION

The burial of dwarfs in elite cemeteries supports the argument for the selective recruitment of this population by the privileged and rulers of the ancient Egyptian society. Furthermore, the engagement of dwarfs by the royals was eloquently documented by Harkhuf, a southern Egyptian governor, who inscribed on his tomb a letter he received from king Pepi II (a pharaoh of the Sixth Dynasty in the Old Kingdom 2325-2150 BCE). The letter praised and promised Harkhuf great rewards for having brought a pygmy or a dwarf from the land of Punt, an ancient land possibly located in the horn of Africa [24]. A



Figure 4: Object no. E9186. Dwarf stela with an inscription of a private person, Nefret. Height 25 cm. Located in W cemetery/Abydos. Egyptian Early Dynasty. Penn Museum. Philadelphia/USA. Image courtesy of the Penn Museum.



Figure 6: Object no. 03.1726. Female dwarf figurine. Dynasty I. Distribution from the Egyptian Exploration Fund, 1901. Boston/USA. Image courtesy of the Museum of Fine Arts.

summary of the letter follows: *“Come north to the palace at once. Hurry and bring that pigmy you have brought alive and happy to delight the heart of the king who lives forever. When he (the pigmy) goes down to the vessel, appoint trusted people, who shall be about him on each side of the vessel. Take care lest he fall into the water. If you arrive at the palace and the pigmy is well, my majesty will do great things for you”.*



Figure 5: Object no. 01.7292. Drawing of a dwarf outlined on a bowl fragment of metamorphic rock. Dynasty I. Distribution from the Egyptian Exploration Fund, 1901. Boston/USA. Image courtesy of the Museum of Fine Arts.



Figure 7: OIP 39 (Mereruka II), pl. 157: Relief. Dwarfs attending Mereruka's animals. Dwarfs frequently handled pets, in particular the animals of their masters. Mereruka was a very powerful official who served during the six dynasty of ancient Egypt. Courtesy of the Oriental Institute of the University of Chicago. Chicago/ USA.

Throughout ancient Egypt, artistic representations reveal dwarfs to be employed as personal attendants, overseers of linen, animal handlers, jewelers, musicians, and dancers (Figure 7-10). Several dwarfs were members of households of high officials and received lavish burial (Figure 11,12). There were at least two dwarf gods, Bes (Figure 13) and Ptah [25]. In ancient Egyptian mythology, achondroplastic dwarfs had magical significance and were associated with the sun god. The function of the dwarfs was for the protection of the living and

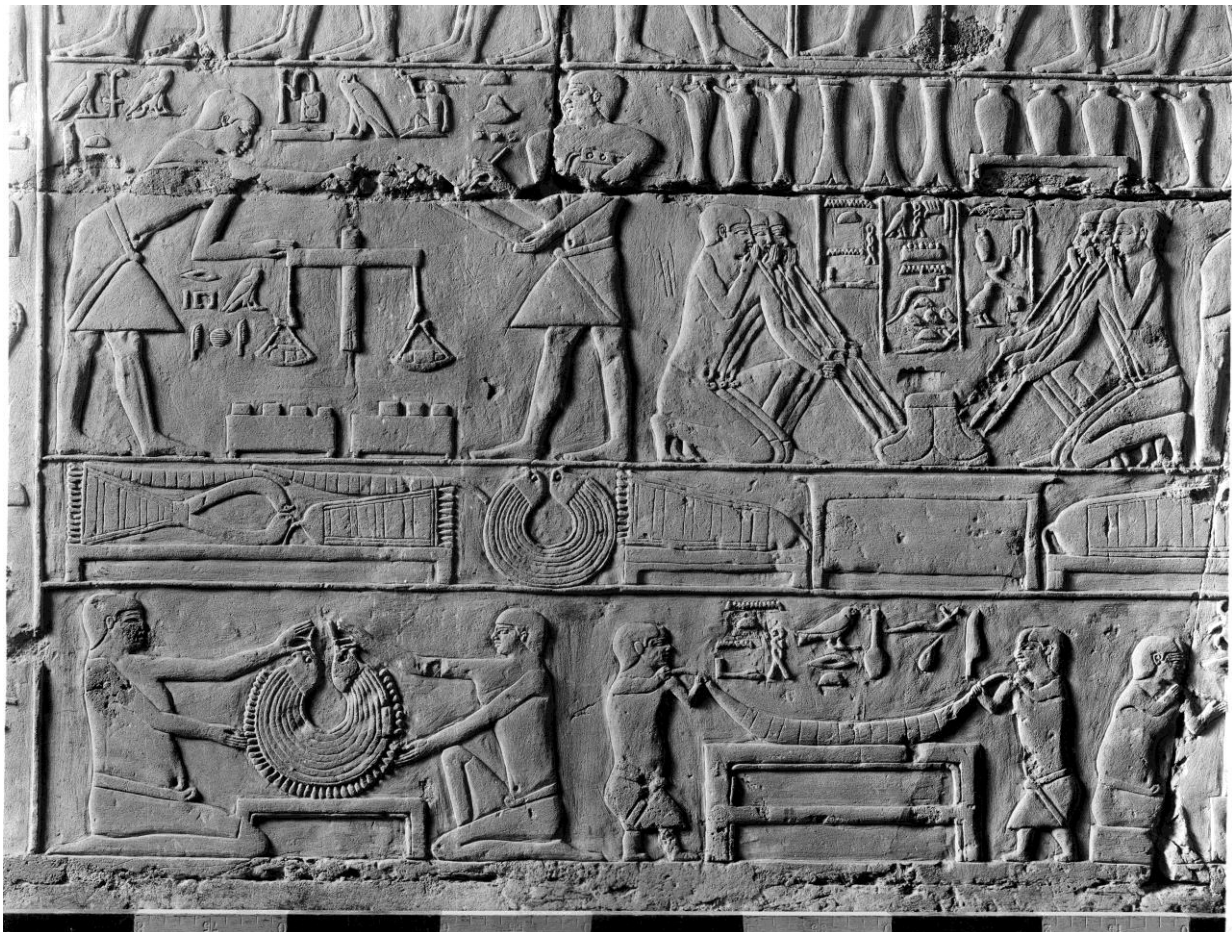


Figure 8: OIP 31 (Mereruka I), pl. 32: Relief, metal workers including dwarfs weighing and smelting ore, pouring molten metal's, beating old gold foil, and making collars and pectorals. Courtesy of the Oriental Institute of the University of Chicago. Chicago/ USA.



Figure 9: Human statue (E10641). Sitting dwarf playing harp. Old Kingdom. Courtesy of the Oriental Institute of the University of Chicago. Chicago/ USA.



Figure 10: Human statue (E10627). Male dwarf carrying sack or water-skin over left shoulder. Old Kingdom. Courtesy of the Oriental Institute of the University of Chicago. Chicago/ USA.

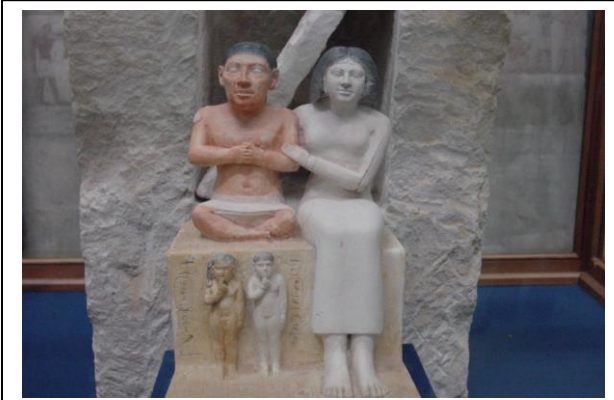


Figure 11: The dwarf Seneb is seated in the position of a scribe on a rectangular seat next to his wife. Underneath him, are 2 of his 3 children holding their fingers to their mouth indicating their young age. The artist who crafted Seneb statue was sensitive by placing his children where his legs would have been. Old Kingdom. Cairo Museum. Cairo/Egypt.



Figure 12: The dwarf Djeho. The profile image of the dwarf depicts the owner at life-size measuring 120 cm. The naked figure of the dwarf is carved on the lid of his sarcophagus and is of superb quality. Hieroglyphic inscriptions on the lid indicate that he belonged to the household of a high official. Reign of Nectanebo II, 346-345 BCE. Late Period. Cairo Museum. Cairo/Egypt.



Figure 13: The god Bes. An ancient Egyptian dwarf deity who was widely worshiped. His most important role was the protection of the mother and child especially during the dangerous time of childbirth. In this figure, he is portrayed with hybrid features of an achondroplastic dwarf and a lion. He wears monkey skin on his back and a serpent as a belt. Late Period. The Louvre Museum. Paris/France.

the dead from dangers including diseases, venomous animals, snakes, crocodiles and other dangers. In incantation 3 against the snakes in the Magical and Medical Papyri of the New Kingdom, the name of dwarf is invoked for protection from the snakes: “O, dwarf! My magical powers are against my enemies. To render the influence of the poison of the snakes harmless. May they be free from intrusion for ever” [26]. Women in childbirth also invoked the help of dwarf gods. In a magical papyrus at Leiden, there is a spell to facilitate birth, called “the spell of the dwarf”: “O good dwarf, come, because of the one who sent you...come down placenta, come down placenta, comedown! [27].

From studying numerous inscriptions and representations on tomb and temple walls, written documents, and funerary objects, ancient Egypt can give many insights into everyday life of dwarfs.

CONCLUSION

Ancient Egypt was the country of sages. They aimed through their teachings to open up the spirit and minds of people to receive Maat, the concepts of truth, balance, and justice [28]. Furthermore, wisdom literature, which flourished in Ancient Egypt, still resonates today. It taught right from wrong, uprightness, honesty in proper governmental positions of trust, salvation through god, and punishment of sins. The scribe Amenemope, who lived during the New Kingdom, wrote moral instructions as a legacy for his son [29]. The Instructions of Amenemope are stored in the British Museum (papyrus EA 10474,4). It is a masterpiece of literary work that gives strong advice about charity, virtue, respect for individuals with disabilities and ministering to the poor:

*Do not jeer at a blind man nor tease a dwarf,
Neither interfere with the condition of a cripple;
Do not taunt a man who is in the hand of God,
Nor scowl at him if he errs.
Beware of stealing from a miserable man
And of raging against the cripple.*

The reverence of dwarfs in ancient Egypt is a phenomenon that started since Predynastic Times. It is supported by the presence of skeletal remains, frequently housed in royal and elite tombs, and abundant artistic representations.

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