

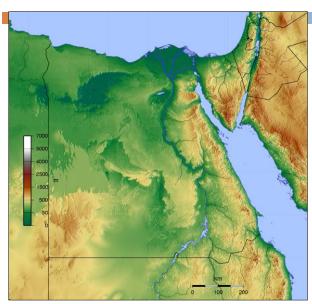
PHYSICAL LANDSCAPES OF **ANCIENT EGYPT**

"EGYPT: GIFT OF THE NILE" - HERODOTUS

Spectroradiometer) image of the Nile River Valley, from NASA.

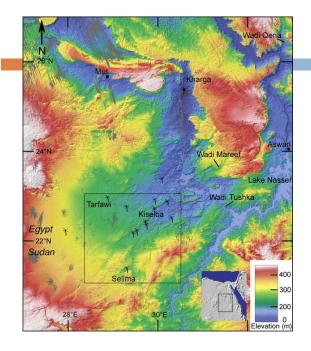
> Dr. John Paul Stimac Honors College and Department of Geology/Geography

Shaded relief map of Egypt

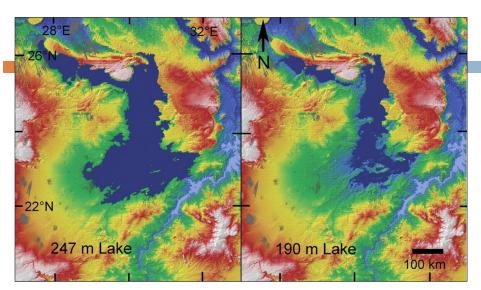


Note low-lying Qattara Depression in north-central Egypt.

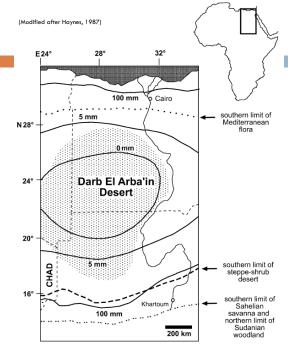
Also note other lowlying areas in the southern part of Egypt.



Digital Elevation Model (DEM) of southern Egypt and adjacent Sudan derived from NASA – provided Shuttle Radar Topography Mission (SRT) 3 arc-sec data. Middle Pleistocene (~0.5 Ma) overflow of Nile River to the west through Wadi Tushka is proposed to account for lake remnants, fossil fish, and paleochannel terminations at 247 m and 190 m. (From Maxwell et al., 2010)

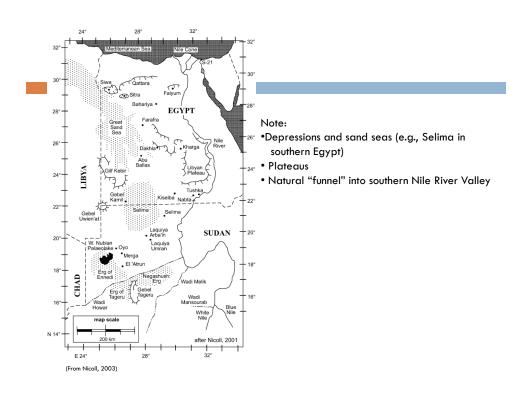


Lake levels at 247 m (68,200 km²) and 190 m (30,400 km²) that would have extended 350 km north from Sudan border to Kharga Oasis. Significant middle Pleistocene recharge of Nubian aquifer was likely by-product of these lakes, as well as creating attractive sites for human settlement. (From Maxwell *et al.*, 2010)

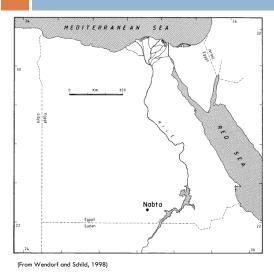


Current, and pre-historic, isohyet patterns for southwestern Egypt.

Pattern would have been shifted about 10° northward after the last glacial period.

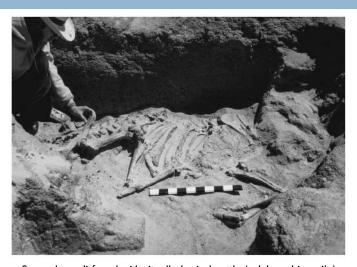


Nabta Playa site – megalithic site



- Constructed in ~6800 BCE;
- Site of megalithic construct;
- Predates Stonehenge by nearly 1,000 years;
- Nearly on the Tropic of Cancer (ideal for an observatory);
- Monsoons shifted south after this period, ~4800 BCE (just prior to development of the Egyptian cultures in the southern Nile River Valley).

Cattle worship was important at Nabta



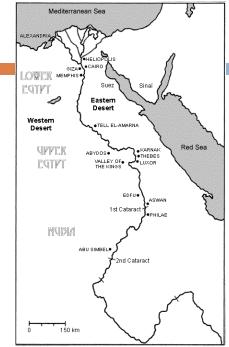
Several tumuli found with ritually buried cattle (adult and juvenile)
(From Wendorf and Schild, 1998)



Isis, the "Mother God"

lsis, the "mother" deity in Egyptian pantheon of gods/goddesses is typically depicted with horns of a bull.

Religion in Egyptian society was an amalgamation of local deities of regions that were conquered — bound the society together.



Geographic isolation

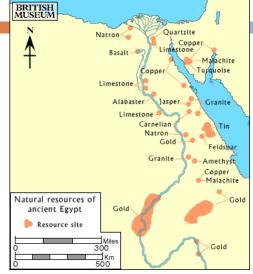
Isolated by the:

- Western Desert to west and south;
- •Eastern Desert and Red Sea on east
- •Mediterranean Sea to the north

This isolation can prove to be beneficial:

- Protected region;
- Abundant natural resources;
- •Fertile soils with regular flooding by the Nile River.

(From Wendorf, 2003)



Natural Resources map of Ancient Egypt. Note that all resource deposits are located immediately west of the Nile River Valley, or to its east in the mountains.

(From the British Museum, 2010)

Brief history of Egypt

- Egyptian History, ~ 3100 BCE to 525 BCE
 - · Pre-history dominated by small city-states along Nile
 - Old Kingdom
 - Menes Narmer united Upper/Lower Egypt
 - · Pyramid building era; pharaohs considered divine
 - Middle Kingdom
 - 2nd Illness saw Semitic invasion: Hyksos from the northeast
 - New Kingdom saw rise of empire
 - 3rd Illness saw invasions by Kush (south), Assyrians (northeast), Sea Peoples
 - Eventually ruled by Persians, Greeks, Romans, Byzantines
- Kush in Upper Nile assimilates Egyptian culture
 - · Ethnically were Black Africans
 - · Adopted many of Egyptian practices: religion, architecture
 - Ruled Egypt as 26th Dynasty
 - · Famous for iron, gold trade
 - Remained independent until Muslim conquests

Physical (geomorphic) features

Deserts give rise to unique aeolian depositional and erosional features

- Depositional
 - Dunes
 - Ergs (sand seas)
- Erosional
 - Regs or serirs (expansive stony pavements)
 - Yardangs





Yardangs in the Western Desert

Note their compositions – lake sediments!

(Both from Nicoll, 1998)

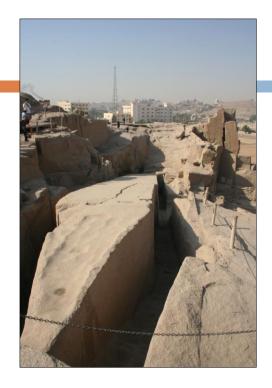
The Sphinx ... or a yardang?



Use of local materials.



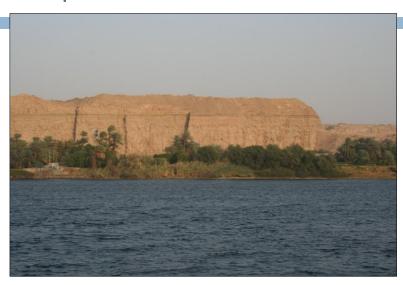
Mud bricks, sandstone and limestone facia, and black granite cobras at Saqqara.



"Red granite" obelisk near Aswan.

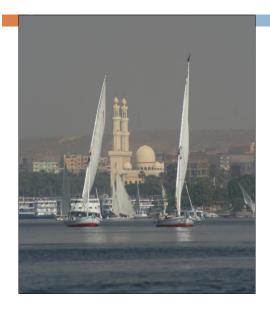
Unfinished owing to a crack that developed after nearly done — duh!

Juxtaposition of fertile area to desert



Note the river and lake(!) deposits in the background.

Felucca on the Nile River at Aswan





Temple at Edfu

- Dedicated to Hathor;
- Built during the Ptolemic Period, between 237 BCE and 57 BCE;
- Mud brocks with a veneer of sandstone;
- Note Hathor in black granite.

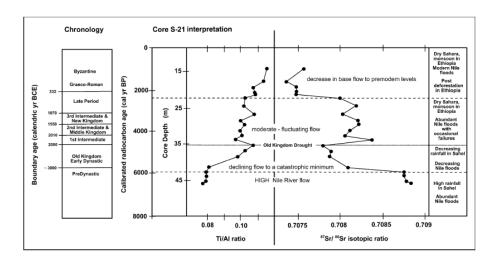




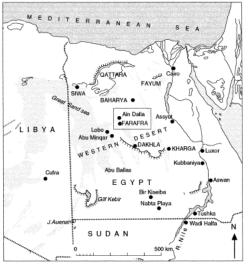
Red granite obelisk

ka cal			Geologic Time		Primary Cultural As after Nic	Interpreted Local Palaeoenvironmental Changes		
4	1 - 2 - 3 -	0.0	Late Holocene	Historic	Islamic Period Byzantine Period Graeco-Roman Period Pharaonic Kingdoms		first camels appear Middle & New Kingdom apex Old Kingdom collapse	hyperarid wind deflation refugia established arid period: low Nile
; ; ; ; -	4 - 5 - 6 -	NARY PERI	Middle Holocene		Predynastic Late Neolithic Middle	Bunat El Ansam "The Megalith- Builders" Ru'at El Baqar "The Cattle-Keepers" Ru'at El Ghanam	Nile Valley population boom megalithic alignments, stone circles "Exodus" from desert cattle burials nomadic pastoralism first villages & ceremonial centres	diminished surface water storage and vegetation aridification aeolian activity
3 - 9 - 0 -	7 - 8 - 9 -	QUATER	Early Holocene	rehistoric	Early	"The Sheep-Herders" El Jerar El Nabta El Ghorab El Adam	apogee of sedentism caprovids introduced from SW Asia bladelet technology; microliths first domestic cattle (?) & pottery exploitation of wild millet, legumes	lakes filled; maximal vegetative cover transition to more rainfall & humid conditions
1 - 5 -	- 10 - - 11 -	M	Late Pleistocene	Pr	Late Palaeolithic/ Middle Stone age		opportunistic pastoralism flake technology	arid conditions aeolian activity

(From Nicoll, 2003)



Summary



- Originally populated by tribes from the south and west;
- Success tied to availability of water;
- Which in turn was tied to climatic variability;
- Rise and fall of the pharaohs directly tied to their environment (river, resources, and barriers) .