

New materials for the appearance of *Crocodylus* from the Early Miocene Moghra Formation, Northern Western Desert, Egypt

Mohamed AbdelGawad (1), Lorna Steel (2), Joseph Sertich (3), Ellen Miller (4), Ahmed El-Barkooky (1), Mohamed Hamdan (1), Hesham Sallam (5), and Gregg Gunnell (6)

(1) Cairo University , Faculty of Science, Geology Department, Egypt (mkabdelgawad@sci.cu.edu.eg), (2) Natural History Museum United Kingdom, London, United Kingdom, (3) Denver Museum of Nature and Science, Denver, Colorado, U.S.A., (4) Wake Forest University, Anthropology Department, Winston-Salem North Carolina, U.S.A., (5) Mansoura University Vertebrate Paleontology Center (MUVIP), Department of Geology, Faculty of Science, Mansoura University, (6) Division of Fossil Primates Duke Lemur Center, Durham, North Carolina, U.S.A. (Pass away)

Neogene African crocodilian, especially in North Africa, are of vital importance for understanding the origin, and the historical biogeography of the modern African and European last crocodilian. Moghra Formation, Qattara Depression of northern Egypt, consists mainly of sandstone and shale intercalations related to tide dominated estuary environment with indication of tropical, warm climate. It is best exposed along the Northern scarp of Qattara Depression. Moghra locality has an abundance and diversity in the vertebrate fossils where it is a good environment for mammals, reptiles, birds and even fishes and it is characterized by a good preservation for the fossils in the sediments. The vertebrate remains are concentrated within four stratigraphic horizons mainly of lag deposits. The crocodilian remains are concentrated only on the first lower horizon. *Crocodylus* has been described and re-identified beside three other crocodilians (*Rimasuchus lloydii*, *Tomistoma dowsoni* and *Euthecodon*). *Crocodylus* from Moghra deposits known to be the oldest form of crocodilians in Africa. Geological and paleontological significance indicate that Moghra known is older than Gabal Zelten, Libya, and similar to deposits at Rusinga, Kenya and Napak, Uganda.