Introduction

No individual has contributed more to the growth of knowledge about mammalian evolution in the Early Tertiary of Africa than Elwyn Simons. For 45 years he has steadfastly worked the Fayum sites, and the efforts of his field teams have yielded an incredible richness of paleontological treasures. Referring to the Egyptian sites by the monolithic term “The Fayum” does not do justice to the diversity of fossil localities contained within the research area. Simons and his colleagues have developed quarries at multiple stratigraphic levels within the early Oligocene, the late Eocene, and in recent years, the middle Eocene (Simons, 1968; El-Kashab et al., 1983; Simons and Rasmussen, 1995; Seiffert et al., 2003, 2005, 2008; Seiffert, 2006). These localities include several famous vertebrate-bearing sites, but also ones that yield fossil terrestrial plants, ichnofossils, and invertebrates (Wing and Tiffney, 1982; Bown et al., 1982; Bown and Kraus, 1988). His forays into neighboring marine Eocene and early Miocene sites have fostered research in those areas as well (e.g., Gingerich, 1992, this volume; Miller, 1999). In sum, the Fayum project represents the most important natural laboratory on the African Early Tertiary in terms of temporal span covered, taxonomic diversity represented, completeness of skeletal remains, and the richness of accompanying paleobiological and paleoecological research.

The research led by Simons also has been important in illuminating paleontological work at other, non-Egyptian Early Tertiary sites of the Arabian-African continent. In the early 20th Century, the Fayum provided the first glimpse of the archaic, endemic mammal faunas of Africa (Andrews, 1906; Osborn, 1908; Schlosser, 1911; El-Kashab et al., 1983). Now, many decades later, similar Early Tertiary mammals have been found at a handful of sites in Mali, Algeria, Tunisia, and Oman (e.g., Mahboubi et al., 1986; Rasmussen et al., 1992; Thomas et al., 1999; Gheerbrant et al., 2002). The Fayum’s magneto- and biostratigraphy has proven to be a central axis by which to compare other African sites.
(Kappelman et al., 1992; Seiffert, 2006). The Simons influence on the Early Tertiary is also manifested by the enlarging ripples of research activity by his students and colleagues at the ever-growing number of other localities found on the continent. Several veterans of the Fayum field crews have gone on to make notable contributions to the early Tertiary of African nations other than Egypt (e.g., Court and Hartenberger, 1992; Godinot, 1994; Kappelman et al., 2003; Stevens et al., 2005, 2006; 2008).

While Simons himself has not strayed from Egypt (if one considers only the Early Tertiary of Africa), at one point he had planned to do so. He organized an expedition to Libya in the late 1960’s when the smooth continuation of his Egypt project was disrupted by war in the region. While Simons’ Libya project never came to fruition, stories of the aborted effort told around the Fayum field camp in the 1980’s intrigued graduate students at the time. This paper describes a new field project in Libya that represents the continuation, after a 36 year hiatus, of paleontological exploration at one of the most important early Tertiary sites of Libya: a long escarpment deep in the Sahara called Dor al-Talha.

History

While Simons was initiating his museum work on Fayum mammals in the 1950s and long before he took to the field in the early 1960s, French geologists exploring for petroleum resources in the deserts of Libya reported the occurrence of Tertiary vertebrates at a few locations (Bellair et al., 1954). The French paleontologist Camille Arambourg provided a preliminary description of these geological outcrops and the fossil mammals they yielded (Arambourg and Magnier, 1961; Arambourg, 1963). Most importantly, Arambourg showed that a few archaic proboscideans and hyracoids recovered from Libya were nearly identical to ones from the Fayum that had been discovered in the early part of the century (Andrews, 1906; Osborn, 1908; Schlosser, 1911). These mammals could be found at two Libyan localities. One of these was near the oasis of Zella, the potential of which was limited, Arambourg complained, by a lack of appropriate exposure (Arambourg and Magnier, 1961; Savage, 1971; Fejfar, 1987). The other locality was a much more extensive escarpment in the desert to the south called Dor al-Talha, “home of the acacias”.*

* The name Dor al-Talha was first applied to the escarpment in a geological context by Bellair et al. (1954). For some reason, Arambourg coined his own term, “Gebel Coquin” for the same escarpment. Savage (1971) rejected that term as “singularly inappropriate” in favor of the original Dor al-Talha. Savage’s student A. W. R. Wight used the spelling Dur at-Talha. Savage reports that the term means “long escarpment” but, in Arabic, it actually means “home or place of the acacia trees.” There are no acacia trees evident there now, and it is unknown whether the name refers to real acacia stands now gone, or was an allusion to the numerous fossil tree trunks evident in the area.