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The Stuttgart collection of Oligocene primates from the Fayum Province of Egypt

PHILIP D. GINGERICH, Ann Arbor*

With 4 figures and 3 tables in the text

* Address of the author: Dr. P. D. GINGERICH, Museum of Paleontology, The University of Michigan, Ann Arbor, Michigan 48109, U.S.A.

Abstract: In 1907, R. MARKGRAF made a small collection of Oligocene fossil primates from Egypt for the Staatliches Museum für Naturkunde in Stuttgart. Circumstances of discovery suggest that this collection came from the same stratigraphic horizon (the Upper Fossil Wood zone) and possibly the same locality as a similar collection made earlier that year by MARKGRAF for the American Museum of Natural History in New York. Three new genera and species were described by SCHLOSSER, based on the Stuttgart collection. *Parapithecus fraasi* SCHLOSSER is a junior synonym of *Apidium phiomense* OSBORN. "*Parapithecus*" *grangeri* SIMONS is placed in the new genus *Simonsius*. *Propliopithecus haeckeli* SCHLOSSER and *Moeripithecus markgrafi* SCHLOSSER have previously been recognized as synonyms. In addition, *Aegyptopithecus zeuxis* SIMONS is known from the Upper Fossil Wood zone.

Zusammenfassung: Eine von R. MARKGRAF 1907 dem Stuttgarter Naturalienkabinett übergebene Sammlung oligozäner Primaten aus Ägypten stammt vermutlich aus dem gleichen stratigraphischen Horizont ("Upper Fossil Wood zone") und vielleicht auch von derselben Lokalität wie eine von ihm schon vorher an das American Museum of Natural History in New York gegebene Sammlung. Letztere wurde von OSBORN (1908) beschrieben, das Stuttgarter Material von SCHLOSSER (1910, 1911). *Parapithecus fraasi* SCHLOSSER ist ein jüngeres Synonym von *Apidium phiomense* OSBORN. *Propliopithecus haeckeli* SCHLOSSER und *Moeripithecus markgrafi* SCHLOSSER wurden schon früher als Synonyme erkannt. Für *Parapithecus grangeri* SIMONS (1974) wird die neue Gattung *Simonsius* aufgestellt. Auch sie stammt aus der "Upper Fossil Wood zone" (Obergrenze der »fluviatil-marinen« Serie des Fayums). Zwei sichere Vertreter der Hominoidea aus dieser Fundschicht sind *Propliopithecus haeckeli* SCHLOSSER und *Aegyptopithecus zeuxis* SIMONS.

Introduction

Primate fossils from Oligocene strata of the Fayum Province of Egypt are the earliest good record we have of higher primates and they are thus of fundamental importance to our understanding of the origin of Anthropoidea. The first primate from the Fayum was described by OSBORN (1908) and named *Apidium phiomense* (Fig. 1). Two years later SCHLOSSER (1910, 1911) named and described three additional genera and species *Parapithecus fraasi, Propliopithecus haeckeli,* and *Moeripithecus markgrafi.* These four genera and species were based on a total of four specimens, all collected by Richard MARKGRAF. They have been beautifully illustrated by KÄLIN (1961). Two additional primate specimens, one a frontal and the other an edentulous mandible were collected by early expeditions but not described until relatively recently (SIMONS 1959, 1961).

This was the extent of our knowledge of early Anthropoidea until E. L. SIMONS of Yale University organized a series of new expeditions to the Fayum during the 1960's. Many additional primate specimens were discovered, which were subsequently described

in a series of publications by SIMONS (1962, 1965, 1967a, 1967b, 1968, 1969a, 1969b, 1970, 1971a, 1971b, 1972, 1974a, 1974b). Much has been written about these finds by others as well, including CACHEL (1975), CONROY (1976a, b), CONROY, SCHWARTZ & SIMONS (1975), DELSON (1975), DELSON & ANDREWS (1975), FLEAGLE, SIMONS & CONROY (1975), GINGERICH (1973), KAY (1977), KAY & HIIEMÄE (1974), PREUSCHOFT (1974), and RADINSKY (1973).

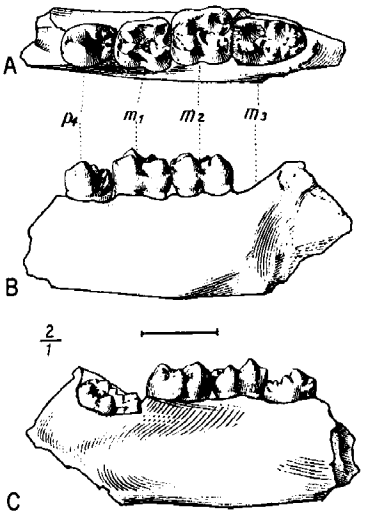

Fig. 1. Type specimen of *Apidium phiomense*, left mandible collected by R. MARKGRAF in 1907 from the Upper Fossil Wood zone, Fayum Province, Egypt. Specimen is in American Museum of Natural History, New York (no. 13370). Illustrated twice natural size in occlusal (A), lateral (B), and medial (C) views. Scale bar is 5 mm. Note erupting P_4 and M_3. Figure from OSBORN (1908).

Most of these publications have been concerned with the anatomy, behavior, and environment of Fayum primates, but SIMONS (1962, 1965, 1974) also added several new taxa to the Fayum primate fauna, including *Oligopithecus savagei, Apidium moustafai, Aegyptopithecus zeuxis, Aeolopithecus chirobates,* and *Parapithecus grangeri.* The stratigraphic distribution of Fayum primates, as understood here, is given in Tab. 1. I was recently able to study all of the type specimens of primate species in New Haven, Ludwigsburg, and Cairo, and made detailed comparisons using very sharp epoxy resin casts. These comparisons indicate that the type specimen of *Apidium phiomense* (Fig. 1) and the holotype of *Parapithecus fraasi* (Fig. 2) are probably conspecific, and hence the names are almost certainly synonyms. The implications of this are discussed below.

Tab 1. Stratigraphic distribution of type specimens of Fayum primate species. See text and SIMONS (1968) for discussion.

Stratigraphic Interval	Species			
Upper Fossil Wood zone	*Apidium phiomense* (*Parapithecus fraasi*)	*Simonsius grangeri*	*Propliopithecus haeckeli* (*Moeripithecus markgrafi*) (*Aeolopithecus chirobates*)	*Aegyptopithecus zeuxis*
Quarry G level	*Apidium moustafai*		*Propliopithecus* sp.	
Lower Fossil Wood zone		*Oligopithecus savagei*		

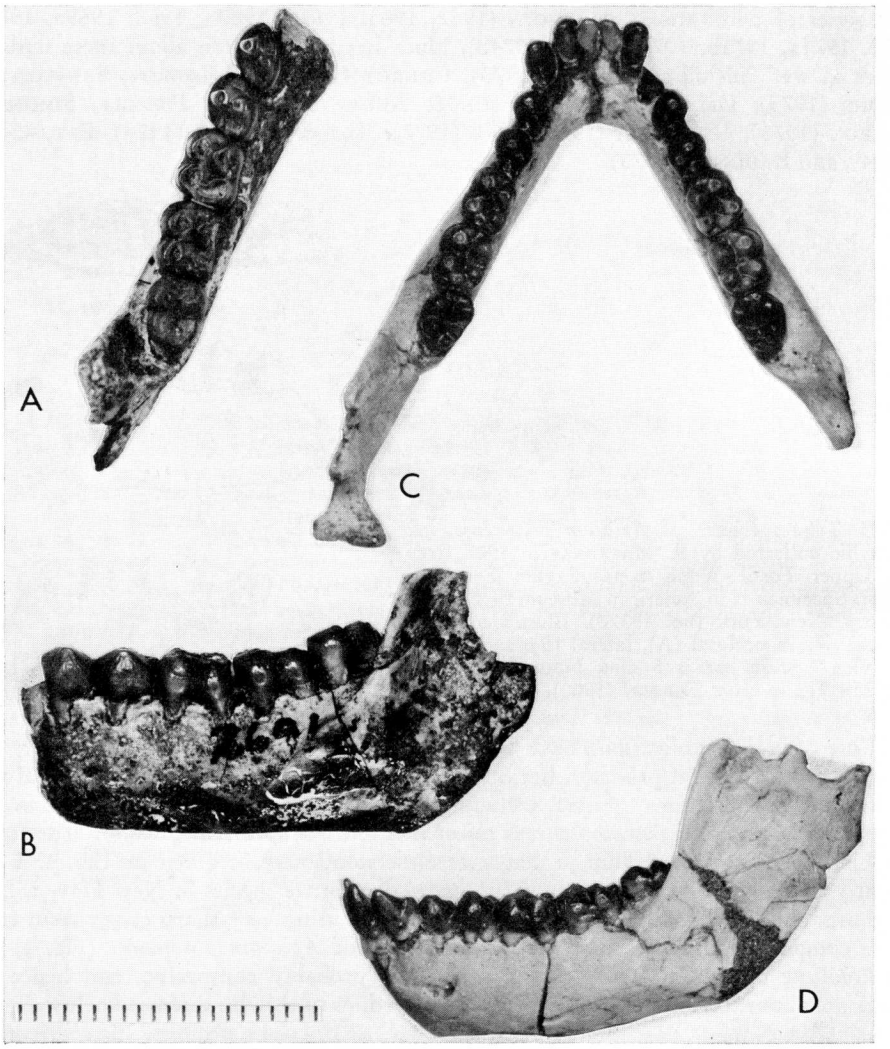

Fig. 2. Two species of Parapithecidae from the Upper Fossil Wood zone, Fayum Province, Egypt. A and B Type specimen of *Simonsius grangeri* (SIMONS 1974), left mandible in occlusal and lateral view. Specimen is in Cairo Geological Museum (no. 26912). C and D Specimen of *Apidium phiomense* (holotype of *Parapithecus fraasi*), left and right mandibles collected by R. MARKGRAF in 1907 (see text) in occlusal and lateral view. Specimen is in Staatliches Museum für Naturkunde Stuttgart (Ludwigsburg). Figures twice natural size, scale in mm.

Type specimens of *Apidium phiomense* and *Parapithecus fraasi*

The type specimens of *Apidium phiomense*, first described by OSBORN (1908), and *Parapithecus fraasi*, described by SCHLOSSER (1910), are illustrated and compared in Fig. 3. Both have been considered closely related (e. g. SIMONS 1962), but it is only very recently that high quality casting techniques have become available permitting one

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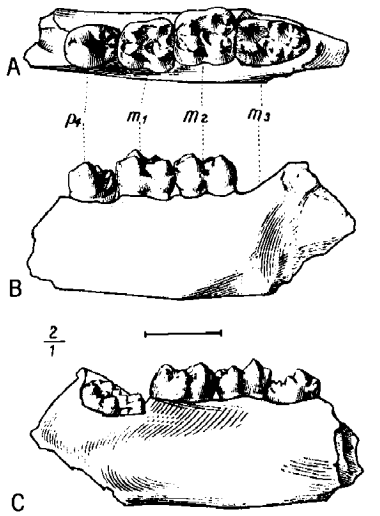

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