

A Reassessment of the Taxonomic and Phylogenetic Affinities of the Fossil Catarrhines from Fort Ternan, Kenya

TERRY HARRISON
New York University

ABSTRACT. This paper presents a reassessment of the taxonomic and phylogenetic affinities of the fossil catarrhine primates from the important middle Miocene site of Fort Ternan in Kenya. Although the sample of specimens is rather small, the material can be attributed to at least five different species, identified here as *Kenyapithecus wickeri*, *Proconsul* sp., a large species of oreopithecoid, *Simiolus* sp., and a small species of catarrhine of indeterminate status. *Kenyapithecus wickeri* probably represents a conservative sister-taxon of the extant large hominoids. It is more derived than “*Sivapithecus*” *africanus* from Maboko Island, from which it can be distinguished at the generic level. A small species of catarrhine from Fort Ternan can be attributed to *Simiolus*. It is probably a different species from *Simiolus enjiessi* from the early Miocene of East Africa, but additional material is needed to confirm its taxonomic distinctiveness. The occurrence of at least five species of catarrhine primates at Fort Ternan confirms that species diversity levels were as high during the middle Miocene as they had been during the early Miocene. However, the overall taxonomic and ecological composition of the middle Miocene catarrhine community was quite different, evidently due to a significant change in the local ecological setting. Taxonomic differences between the catarrhine faunas at Fort Ternan and Maboko Island can probably be explained as a consequence of a chronological separation between the two sites, and, to a lesser degree, to paleoecological differences.

Key Words: Catarrhines; Hominoids; East Africa; Miocene; Fort Ternan; Taxonomy; Phylogenetic relationships; *Kenyapithecus*; *Simiolus*; *Proconsul*; Oreopithecoids.

INTRODUCTION

The middle Miocene site of Fort Ternan in Kenya, the type locality of *Kenyapithecus wickeri*, has received a good deal of attention from palaeoanthropologists since it was first excavated by L.S.B. LEAKEY in 1961. During the 1960s and 1970s *Kenyapithecus wickeri* was considered to be closely related to, and possibly even synonymous with, the purported early hominid *Ramapithecus* from the Siwalik Hills of Indo-Pakistan. However, by the early 1980s, *Kenyapithecus* had suffered the same fate as its Asian counterpart, and was deplored as a potential candidate for human ancestry (see WOLPOFF, 1983). Nevertheless, the paucity of hominoid-bearing sites from the later part of the Miocene in Africa, especially those as well-dated as Fort Ternan, and with faunas as intensively studied, has meant that the site has remained one of the most important Neogene localities in sub-Saharan Africa. In recent years, with the cessation of active fieldwork at Fort Ternan, the focus of interest has shifted away from the study of the fossil primates themselves, to one encompassing more broad-based attempts to understand the paleoecology at Fort Ternan and its significance for interpreting changes in the catarrhine community structure in East Africa during the Miocene (e.g. ANDREWS & NESBIT EVANS, 1979; SHIPMAN et al., 1981; SHIPMAN, 1986; PICKFORD, 1983a, 1985a, 1986a, 1987; KAPPELMAN, 1991).

Table 1. A catalogue of fossil catarrhines from Fort Ternan^{a)}.

Accession No.	Specimen	Taxon	Previous references ^{b)}
KNM-FT 7	Right mandibular fragment with P ₄ -M ₁ . Dentition damaged and worn.	<i>K. wickeri</i>	<i>R. wickeri</i> (5,6) <i>K. wickeri</i> (8)
KNM-FT 8	Left C ¹ germ preserved in a maxillary fragment. ♀	<i>K. wickeri</i>	<i>R. wickeri</i> (6) <i>K. wickeri</i> (8)
KNM-FT 11	Left I ¹ . Unworn; slightly abraded.	Indet. sp.	cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 12	Edentulous mandibular symphysis.	Indet. sp.	cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 13	Edentulous mandibular symphysis of an immature individual.	<i>Simiolus</i> sp.	
KNM-FT 14	Left mandibular fragment of an immature individual with M ₁ exposed in its crypt.	<i>Simiolus</i> sp.	cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 15	Left C ¹ . Worn. ♀	Indet. sp.	cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 16	Left M ¹ . Slightly worn.	<i>Proconsul</i> sp.	<i>Dryopithecus</i> cf. <i>africanus</i> (6) <i>P. africanus</i> (7) <i>?P. africanus?</i> (8)
KNM-FT 17	Left M ₁ . Unworn.	Indet. sp.	cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 18	Right P ₄ .	Indet. sp.	cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 19	Left M ³ . Moderately worn.	<i>Simiolus</i> sp.	cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 20 ^{c)}	Left mandibular fragment with C ₁ -M ₃ . Dentition moderately worn. ♀	<i>Simiolus</i> sp.	cf. <i>Limnopithecus</i> (3) cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 21 ^{c)}	Right M ₂ . Moderately worn.	<i>Simiolus</i> sp.	cf. <i>Limnopithecus</i> (3) cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 23 ^{c)}	Right M ₃ . Moderately worn.	<i>Simiolus</i> sp.	cf. <i>Limnopithecus</i> (3) cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 24 ^{c)}	Right P ₄ . Moderately worn.	<i>Simiolus</i> sp.	cf. <i>Limnopithecus</i> (3) cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 25 ^{c)}	Right I ₂ . Slightly worn.	<i>Simiolus</i> sp.	cf. <i>L. legetet</i> (6) <i>L. legetet</i> (7)
KNM-FT 28	Right C ₁ . Unerupted. ♂	<i>K. wickeri</i>	<i>Dryopithecus</i> cf. <i>nyanzae</i> (6) <i>P. nyanzae</i> (7) <i>K. wickeri</i> (8)
KNM-FT 29	Left P ³ . Slightly worn.	<i>Proconsul</i> sp.	<i>Dryopithecus</i> cf. <i>africanus</i> (6) <i>P. africanus</i> (7) <i>?P. africanus?</i> (8)
KNM-FT 34	Left M ₃ . Heavily worn.	<i>K. wickeri</i>	<i>Dryopithecus</i> cf. <i>nyanzae</i> (6) <i>P. nyanzae</i> (7) <i>K. wickeri</i> (8)
KNM-FT 35	Right P ₃ . Slightly worn; damaged.	<i>K. wickeri</i>	<i>Dryopithecus</i> cf. <i>nyanzae</i> (6) <i>P. nyanzae</i> (7) <i>K. wickeri</i> (8)
KNM-FT 36	Right M ¹ . Badly weathered.	Oreopithecid	cf. <i>Oreopithecus</i> (3) Suidae (6) <i>Oreopithecus</i> sp. (9)

(continued)

