

# The Dryopithecinae in Asia

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Of the three hominid subfamilies, two (Dryopithecinae and Ponginae) are represented in the Miocene of Asia. Although recent work (Pilbeam et al., 1990) has questioned the relationship of *Sivapithecus* to *Pongo*, that still appears to be the best documented link between any Miocene hominoid and an extant taxon; *Gigantopithecus* may also belong in the Ponginae, although there is far less evidence to support that placement.

More problematic is the question of the generic affinity of the several sets of mostly fragmentary Asian remains which have been referred to the European genus *Dryopithecus* in its currently understood sense (not including, for example, specimens originally named *Dryopithecus* and later included in *Ramapithecus*). Pilgrim (1927) described a worn and mesially damaged isolated lower molar from Haritalyangar as *Hylopithecus hysudricus*; fossils from this area are now thought to date between 8-7 Ma. Gregory, Hellman & Lewis (1938) discussed a partial right mandibular corpus with P<sub>3</sub>-M<sub>2</sub> from Kundal Nala which they termed *Ramapithecus cf. brevisrostris*; this locality was thought to be of late Chinji age, and may date to around 11.5 Ma. Pilbeam (1969) described as *Ramapithecus* a partial corpus with damaged teeth from Domeli (also perhaps ca. 11.5 Ma). Kay (1982) made the Kundal Nala jaw the holotype of his *Sivapithecus simonsi*, and referred the Domeli jaw to that taxon. Von Koenigswald (1983) described a corpus fragment with P<sub>4</sub>-M<sub>1</sub> and an isolated M<sup>17</sup> from near Khaur, Pakistan (ca. 8 Ma?). Xue & Delson (1988) transferred *S. simonsi* to a broadly defined *Dryopithecus*, including all four of the previous specimens. The "*Hylopithecus*" tooth probably also belongs in that genus, but its specific identity depends in part upon its serial

identification (M<sub>2</sub>?). Xue & Delson (1988) also described the new species *D. wuduensis*, based on a partial corpus with teeth from Gansu province, China. All of these fossils appear to have thin molar enamel, slight to no cingulum development and a deep and moderately thick corpus with distinct superior and inferior symphyseal tori. It is possible that they may all eventually be placed in a distinct genus from the European *Dryopithecus*, for which the name *Hylopithecus* is probably available.

Other Chinese specimens possibly relevant to this assemblage of species are known from two other sites. Woo (1957, 1958) described *Dryopithecus keiyuanensis* for two sets of associated lower teeth from the Xiaolongtan lignite, probably dated ca. 12.5 Ma; additional specimens were described by Zhang (1988). It is difficult to be certain, but the enamel on these teeth may be thicker than on the previous set. The primates from Sihong (Xiacaowan Fm., ca. 16-18 Ma?), Jiangsu province, China, were most recently reviewed by Harrison, Delson & Guan (1991, *JHE*, 21), who suggested that *Platodontopithecus jianghuaiensis* Gu & Lin, 1983, and especially "*Dryopithecus*" *sihongensis* Lei, 1985 might be most similar to East African taxa such as *Proconsul*, *Afropithecus* or *Kenyapithecus*.

Three other taxa are often thought to group with *Sivapithecus* and *Pongo*, but *Lufengpithecus*, *Graecopithecus* (?senior synonym of *Ouranopithecus*) and *Griphopithecus* (Pasalar and Neudorf, perhaps also Klein Hadersdorf) all require re-evaluation in light of recent findings—do they share derived characters with either Ponginae or Homininae?