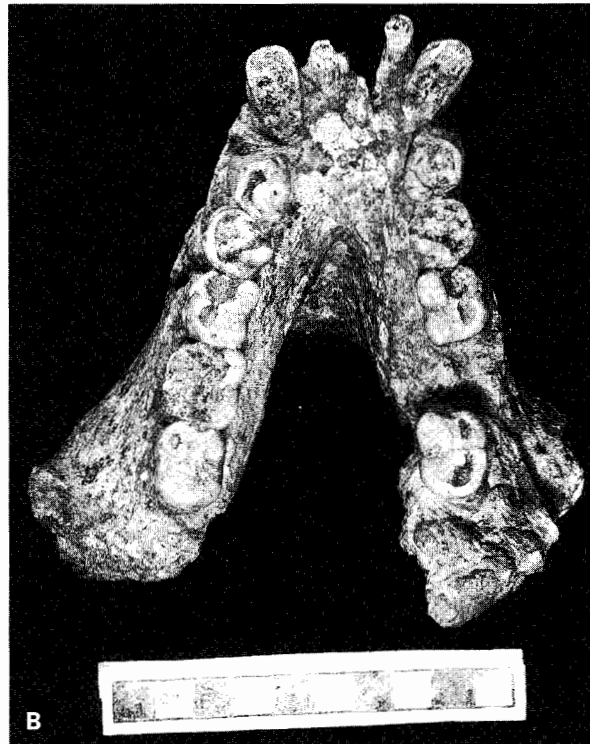
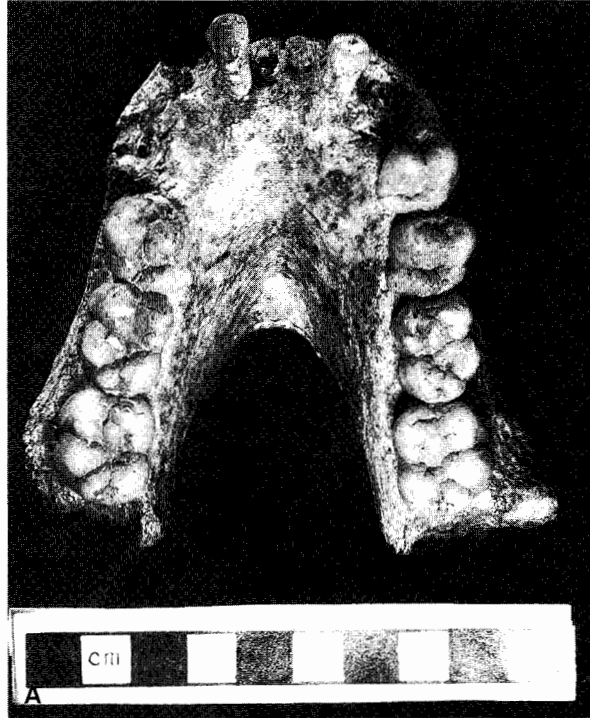


By G. G. Pope and E. Delson



Gigantopithecus

Extinct giant hominoid first recognized by G.H.R. von Koenigswald on the basis of a single M_3 purchased in a Hong Kong drugstore in 1935. Since then, more than 1,000 other specimens, mostly isolated teeth but including four massive mandibles, have been recovered from the Siwalik Hills and from the karst caves of southern China and Vietnam. The Chinese species, *Gigantopithecus blacki*, is thought to span the Early Pleistocene and most of the Middle Pleistocene. The earlier *Gigantopithecus giganteus* (= *G. bilaspurensis*) dates to ca. 9–6 Ma in the Siwalik sequences of Indo-Pakistan. This species is smaller than the Pleistocene Chinese form, and it thus appears that *Gigantopithecus* increased in size from Late Miocene to Late Pliocene time, if not throughout the Pleistocene. The youngest specimens may date to ca. 400 Ka in northern Vietnam, where *Gigantopithecus* occurs alongside *Homo cf. erectus*, an association also present somewhat earlier in China. Despite its occurrence in almost a dozen sites, no cranial or postcranial elements of *Gigantopithecus* have ever been recovered, probably as a result of porcupine bone-eating in caves.

There has been much discussion concerning the taxonomy and ecology of *Gigantopithecus*. A few workers have argued that this genus should be classified as a hominin ancestor.



Mandibles of *Gigantopithecus blacki* from Early Pleistocene of Liucheng, southern China: occlusal views of (a) subadult female (M_3 not yet erupted) and (b) adult male, left lateral view of adult female (above, M_3 lost) and (c) male. Scale bars in cm.

tor because of its small incisors and stubby canines. In fact, however, the canines have a large diameter like those of apes, and their reduction in height is probably due to premolarization: They are worn flat on the tips from grinding use like premolars rather than puncturing like the usual catarrhine canines. Molars and premolars are large and rather flat, with very thick enamel, and the deep mandibles further reflect an adaptation to heavy chewing of harsh foodstuffs (in part, bamboo?). *Gigantopithecus* was probably derived from a *Sivapithecus* (or possibly *Lufengpithecus*) ancestry, and it is usually classified in the Ponginae. The best estimate is that *Gigantopithecus* increased in size as an adaptation to dietary pressure, much as did *Theropithecus*. The body size of *Gigantopithecus* is nearly impossible to estimate realistically, as there are no weight-bearing bones known, and the animal might well have been macrodont (i.e., with teeth and jaws especially large for body size).

See also Asia, Eastern and Southern; China; Dragon Bones (and Teeth); Hominidae; Hominini; Hominoidea; Koenigswald, Gustav Heinrich Ralph Von; Ponginae; Siwaliks. [G.G.P., E.D.]

Further Readings

Ciochon, R., Long, V.T., Larick, R., González, L., Grün, R., de Vos, J., Yonge, C., Taylor, L., Yoshida, H., and Reagan, M. (1996) Dated co-occurrence of *Homo erectus* and *Gigantopithecus* from Tham Khuyen Cave, Vietnam. *Proc. Nat. Acad. Sci. USA* 93:3016–3020.

REPRINTED FROM:

Encyclopedia of Human Evolution and Prehistory, 2nd ed; E. Delson, I. Tattersall, J. A. Van Couvering and A. S. Brooks, eds. Garland: New York. 2000

WITH THE COMPLIMENTS OF:

Eric Delson
Department of Vertebrate Paleontology
American Museum of Natural History
New York, NY 10024