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Q2(a)

Discuss the palaeoanthropological significance of Siwaliks of India giving its subdivisions, fossil primate fauna and major primate fossil localities

UPSC Civil Services Mains 2025 · Anthropology GS 2 · 20 marks · Palaeo-Anthropological evidences from India with special reference to Siwaliks and Narmada basin (Ramapithecus, Sivapithecus and Narmada Man).

1.2 Palaeo-Anthropological evidences from India with special reference to Siwaliks and Narmada basin (Ramapithecus, Sivapithecus and Narmada Man).

Core demand of the question

- State why the Siwaliks matter for palaeoanthropology
- Give the lithostratigraphic subdivisions used in primate work
- Name the fossil primate fauna and the major localities
- Assess what the Siwaliks do and do not prove about hominoid evolution

Revision summary

Siwaliks are a Himalayan foreland molasse with Lower, Middle and Upper groups.

Miocene hominoids centre on **Sivapithecus** (including former Ramapithecus) and large Indopithecus/Gigantopithecus.

Haritalyangar, Ramnagar and Potwar Chinji are key localities.

Ramapithecus is no longer a hominin; the face aligns with orangutans.

The sequence is vital for Asian apes, not for an Indian origin of Homo.

Introduction

The Siwalik Hills are a Neogene-Quaternary foreland sequence along the southern Himalaya. For palaeoanthropology they are India's richest hominoid archive: not a cradle of Homo sapiens, but a long record of Miocene apes and later mammals against which African and Chinese finds are compared.

Body

Subdivisions

Geologists divide the Siwaliks, in broad teaching order, into **Lower (Kamlial-Chinji)**, **Middle (Nagri-Dhok Pathan)** and **Upper (Tatrot-Pinjar-Boulder Conglomerate)** groups. Ages run roughly from the Middle Miocene into the Pleistocene. Chinji and Nagri beds matter most for large hominoids. Pinjar holds later fauna, including some disputed hominin-bearing claims. The sequence is a **molasse**: rivers dumped sand and clay south of the rising Himalaya, so fossils sit in fluvial channels and floodplains, often fragmentary.

G. E. Lewis, Pilgrim, Colbert, then **S. R. K. Chopra, W. E. Le Gros Clark, David Pilbeam, J. G. E. Lewis's Ramapithecus**, and Indian teams at **Chandigarh** and the **Wadia Institute** built the primate list.

Fossil primate fauna

- **Sivapithecus** (including material once split as Ramapithecus): a Miocene ape with a dished face close to the orangutan line. Localities include **Haritalyangar** (Himachal), **Chinji** and **Potwar** (Pakistan), and other Himachal-Punjab Siwalik pockets.
- **Gigantopithecus** teeth from the Indian Siwaliks (and better Chinese cave samples) show a huge ape, not a human ancestor.
- **Indopithecus** / "**Gigantopithecus**" **giganteus** from **Haritalyangar** is a large Indian hominoid.
- Smaller catarrhines and pliopithecoid-like forms appear in some lists; many are poorly preserved.
- Later beds yield cercopithecoids and a rich ungulate-proboscidean fauna that dates the primates by association.

Ramapithecus, once sold as a 14-million-year-old hominin with small canines, was folded back into **Sivapithecus** after face and palate finds (Pilbeam and others). The Siwaliks therefore record **pongine (orang-related) apes**, not early Australopithecus.

Major localities

Haritalyangar remains the Indian type landscape for **Sivapithecus** and Indopithecus. **Ramnagar** (Jammu) has added **Sivapithecus**. Pakistani Potwar sections (Khaur, Chinji) are stratigraphically clearer. **Narmada** (Hathnora calvarium) is not Siwalik; it is a central Indian Pleistocene hominin and must not be mixed into this answer.

Significance

The Siwaliks prove that large hominoids lived on the Indian plate in the Miocene, that orangutan ancestry has an Asian fossil story, and that Himalayan uplift and monsoon rivers created the burial setting. They do **not** prove that humans originated in India. **Out of Africa** for Homo still stands. Siwalik work is biostratigraphy plus careful taxonomy, not nationalism about "the first man".

Flow diagram

Lower Chinji -> Middle Nagri
 Middle Nagri -> Upper Pinjor
 Middle Nagri -> Sivapithecus
 Sivapithecus -> Orang line
 Sivapithecus -> old claim Hominin rejected

Conclusion

Lower to Upper Siwalik stages frame a Miocene ape fauna led by **Sivapithecus** at **Haritalyangar** and related beds. Ramapithecus as a hominin is retired. The range is central to Asian hominoid phylogeny and silent on the origin of modern humans.

Facts & figures

Haritalyangar

Himachal Siwalik locality famous for Sivapithecus and large hominoid jaws used in the Ramapithecus debate.

Sivapithecus

Miocene ape whose facial profile is close to Pongo (orangutan), not to Australopithecus.

Ramapithecus revision

Pilbeam and others showed that Ramapithecus specimens belong with Sivapithecus, ending its career as a hominin ancestor.

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