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Q2(a)

Discuss major species of Australopithecus discovered from South and East Africa. Describe the discovery, physical features and significance of Taung baby.

UPSC Civil Services Mains 2023 · Anthropology GS 1 · 20 marks · Plio-pleistocene hominids in South and East Africa

(a) Plio-pleistocene hominids in South and East Africa-Australopithecines.

Core demand of the question

- Discuss major species of Australopithecus discovered from South and East Africa
- Describe the discovery, physical features and significance of Taung baby
- Write at 20-mark length

Revision summary

Australopithecus is a small-brained African biped of the Pliocene and early Pleistocene.

East African species include *A. anamensis*, *A. afarensis*, and *A. garhi*.

South African species include *A. africanus* and *A. sediba*, with Little Foot as a key skeleton.

Taung was found in 1924 and named by Raymond Dart in 1925.

The child shows a downward foramen magnum, small canines, and an ape-sized brain.

Significance is the African origin argument and the type of *A. africanus* after early rejection.

Introduction

Australopithecus is the Pliocene-early Pleistocene African hominin with small brains, large chewing teeth, and bipedal hips. South and East African caves and beds have yielded the named species, and the Taung child is the find that opened that file.

Body**East African species**

- **Australopithecus anamensis**, named by **Meave Leakey** from Kanapoi and Allia Bay, Kenya, is among the earliest, with a primitive jaw and a tibia that already suggests upright walking.
- **Australopithecus afarensis is the best-known East African species: Lucy** (AL 288-1) from Hadar, Ethiopia, recovered by **Donald Johanson**, and the **Laetoli** footprints reported by **Mary Leakey**, show a small-brained biped with curved fingers.
- **Australopithecus garhi** from Bouri, Middle Awash, associated with **Berhane Asfaw** and **Tim White's** team, has larger postcanine teeth and has been discussed beside early stone-tool cut marks.
- Later named East African forms such as **A. deyiremeda** add diversity beside **Kenyanthropus platyops**, which some workers still compare with the australopithecine grade.

South African species

- **Australopithecus africanus** is the South African type species, from Taung, then **Sterkfontein** and **Makapansgat**, with **Robert Broom's** adult finds such as **Mrs Ples** confirming Dart's child.
- **Australopithecus sediba** from Malapa, announced by **Lee Berger**, mixes australopith and more Homo-like pelvis and hand traits at about 2 million years.
- **Little Foot** (StW 573) from Sterkfontein, associated with **Ron Clarke**, is often placed in *A. prometheus* or in *africanus*; either way it is a near-complete South African skeleton.
- Robust forms from Kromdraai, Swartkrans, and Olduvai are usually now **Paranthropus** (*P. robustus*, *P. boisei*), not *Australopithecus*, and should be named as cousins, not as the same genus.

Taung baby: discovery

- In 1924 a limestone quarry at **Taung**, then in the northern Cape, yielded a child's skull, mandible, and natural endocast that reached **Raymond Dart** in Johannesburg.
- Dart named *Australopithecus africanus* in *Nature* in 1925 and argued that the child was a hominin, not an ape.

Taung baby: features

- The child was about three to four years old on dental eruption, with a mixed deciduous and first-molar set.
- The endocast suggested a brain larger than a chimpanzee of similar age in Dart's reading, though still far below later Homo.
- The foramen magnum sits toward the underside, which Dart used as evidence of upright carriage.
- Canines are small, the face is less projecting than in living apes, and there is no simian shelf of the kind expected in a young ape.

Taung baby: significance

- Taung shifted the search for human origins toward Africa, against the then-preferred European and Asian candidates and against **Pittdown**.
- **Arthur Keith** and others rejected an infant from a quarry; Broom's later adults and East African work after the 1950s reversed that rejection.
- Taphonomy later suggested a bird of prey may have taken the child, which is a caution about cave death, not a denial of the taxon.
- The specimen remains the type of *A. africanus* and the teaching start of australopith bipedalism with an ape-sized brain.

Flow diagram

East Africa -> *A. anamensis*
 East Africa -> *A. afarensis* Lucy Laetoli
 South Africa -> *A. africanus* Taung
 South Africa -> *A. sediba* Malapa
A. africanus Taung -> Dart 1925

Conclusion

East Africa supplies anamensis, afarensis, and related named species; South Africa supplies africanus, sediba, and Little Foot. The Taung child is the 1924-25 discovery that made that African biped real to science, even before the adult caves and Hadar confirmed it.

Facts & figures

Raymond Dart, 1925

Named Australopithecus africanus from the Taung child in Nature and argued for African hominin status.

Lucy (AL 288-1)

Partial A. afarensis skeleton from Hadar, Ethiopia, showing bipedal pelvis and small brain.

Laetoli footprints

Pliocene tracks in Tanzania reported by Mary Leakey's team, attributed to bipedal australopiths.

Australopithecus sediba

Malapa, South Africa, described by Lee Berger's team, with a mosaic of australopith and Homo-like traits.

Mrs Ples

Adult Sterkfontein cranium recovered by Robert Broom that supported Dart's child as a real taxon.

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