

Frequently Asked Questions

1. Are mammoths the ancestors of elephants?

No, mammoths and elephants are close relatives and belong to the same family – Elephantidae. In Africa, about six million years ago, a branch of Elephantidae split into three groups: Loxodonta, the ancestors of African elephants; Elephas, the ancestors of Asian elephants; and Mammuthus, the earliest mammoths.

2. Where did the first proboscideans originate? From there, where did they disperse?

The first proboscideans originated in Africa. From there they migrated into Asia and Europe. The proboscideans that migrated into Asia then crossed over into North America on the Bering Land Bridge. Once in North America, proboscideans spread throughout the continent and eventually into South America.

3. What parts of Lyuba are scientists using to learn about her life history? What have they learned?

Scientists are studying Lyuba’s well-preserved DNA to learn more about mammoth history in Siberia. Her teeth help scientists determine how long she spent in her mother’s womb, when she was born, and her approximate age when she died. Lyuba’s intestines show what kind of nourishment she received. X-rays and CT-scans combined with forensic examinations reveal Lyuba’s distinctive mammoth features and her bone structure. Examination of Lyuba’s trunk, mouth, esophagus and trachea help scientists suggest her cause of death.

4. What was one adaptation that resulted from mammoths living in cold environments?

Mammoths eventually evolved thick fat layers beneath their skin. They also had a warm “undercoat” of fur and an “overcoat” of guard hairs—some up to three feet in length—to protect against the wind.

5. How do scientists better understand what the mammoth diet was in a particular region?

Scientists analyze mammoth dung to determine what mammoths ate. For example, preserved mammoth dung from a cave in Utah named “Bechan” contains fragments of vegetation suggesting a diet rich in grasses, sedges and other plants. These plants suggest that Utah, during the time of the mammoths, was fairly dry with pockets of wetlands.

6. What are the physical differences between mammoths and mastodons?

Mastodons are shorter and stockier than mammoths and evolved differently shaped skulls, tusks and teeth. Mastodons evolved cone-shaped cusps on their molars adapted to pulverizing leaves, twigs and bark while mammoths have more flat ridges which are better suited to a diet rich in grasses.

7. What is the most endangered species of elephant today? Approximately how many of these elephants still survive? Where are these elephants found?

The Asian elephant is the most endangered elephant species today; only about 30,000 survive worldwide. Wild populations are found in India, Nepal, Bhutan, Bangladesh, Sri Lanka, Myanmar, Thailand, Laos, Cambodia, Vietnam, China, Malaysia and Indonesia.